

*The Citizens Band and  
International Shortwave  
Radio Magazine*

**DXing**



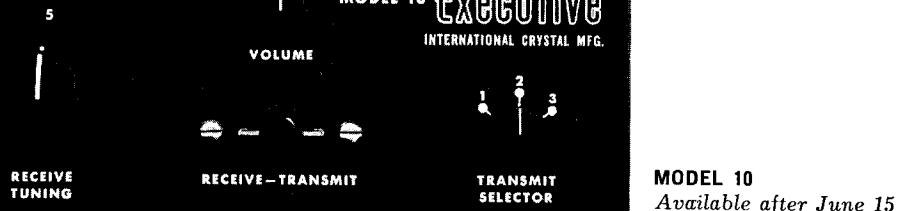
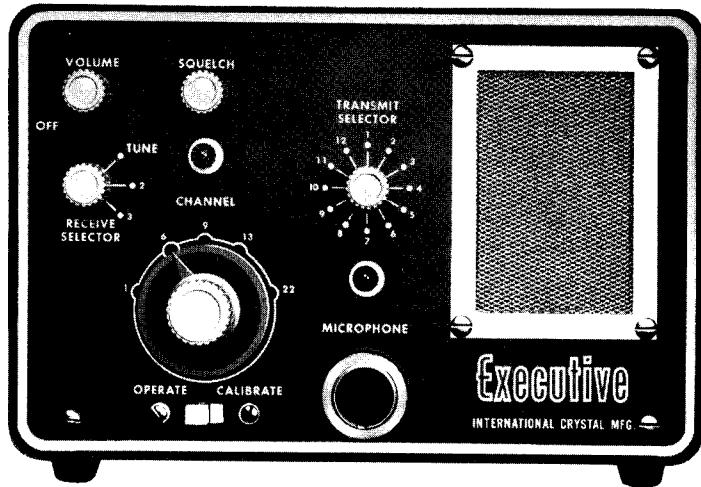
JUNE 1961

40 CENTS

**MODESTO MIKE...**

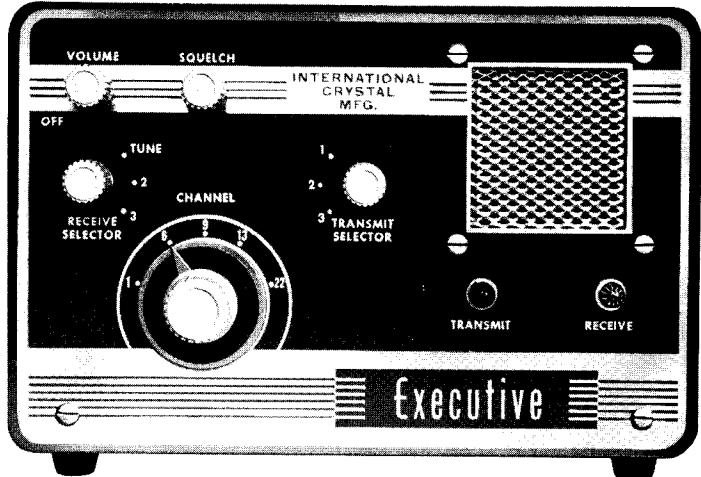
**your personal guide to the worlds of CB and DX.**

**MODEL 100**  
*Available after June 15*



**MODEL 10**  
*Available after June 15*

**MODEL 50**  
*Available after April 15*



**INTERNATIONAL'S**

**new  
series** **Executive**

**for SUPERIOR Citizens band communication**

**INTRODUCING THREE SYSTEM-ENGINEERED TRANSCEIVERS**

**MODEL 100**

The ultimate in Executive Citizens transceivers. NEW crystal filter which minimizes adjacent channel interference in the receiver. NEW built-in receiver calibration circuit. NEW International NR squelch. NEW 12 position crystal control transmit channel selector. NEW front panel microphone jack. NEW provision for connecting external speaker and S/meter. Dual conversion superheterodyne receiver. Push-to-talk operation. Three way power supply for 6/12 vdc, 115 vac. Complete with 1 transmit crystal, 1 receive crystal, new style ceramic microphone and coil cord..... \$199.50 \*

**MODEL 10**

International's exciting NEW Compact transceiver for the budget minded customer who desires quality workmanship and engineering plus the best possible circuit for the money invested. Field tested full 5 watt transmitter contained in the higher price Executives. Tunable superheterodyne receiver covering all 23 channels. Three position crystal control transmit channel selector. Manual transmit-receive control. Noise limiter. Available accessories include four separate power supplies— 6 vdc, 12 vdc, 24 vdc or 115 vac, push-to-talk relay kit, squelch kit, and 12 position transmit channel selector. Complete with 1 transmit crystal, matching microphone and external speaker, but less power supply..... \$59.50 \*

**MODEL 50**

A precision engineered transceiver featuring push-to-talk operation. Three position crystal control transmit channel selector. Dual conversion superheterodyne receiver tuning all 23 channels. Series Gated automatic noise limiter. NEW International NR squelch. Three way power supply — 6/12 vdc, 115 vac. Additional features of Model 100 are available as accessories, and may be added at any time. Complete with 1 transmit crystal, matching microphone .....

\$149.50 \*

\*Suggested Price

**SEE THE EXECUTIVE SERIES AT YOUR AUTHORIZED INTERNATIONAL DEALER**



**INTERNATIONAL CRYSTAL MANUFACTURING CO., INC.**

18 NORTH LEE • OKLAHOMA CITY, OKLAHOMA



# HORIZONS

Formerly *DXing Horizons*

PUBLISHED MONTHLY BY HORIZONS PUBLICATIONS  
POST OFFICE BOX 3150 • MODESTO, CALIFORNIA

## STAFF

R. B. COOPER, JR., K6EDX  
Publisher

THOMAS S. KNEITEL, 2W1965  
Managing Editor

ART W. BROTHERS, 11WO759

ROBERT D. GRIMM  
Associate Editors

KENNETH R. BOORD

STAN LEINWOLL

REX HOLMES

A. R. NIBLACK

GLEN KIPPEL

Contributing Editors

DARLENE GONZALES

Editorial Assistant

JACKIE JOHNSON

Production Manager

STAN SEARLE

Art Director

R. WAYNE WILSON

L. LANG

Art Associate

RODNEY H. ADAMS

Advertising Manager

SHERRY GREENER

Circulation Manager

## OFFICES

1016 -14th STREET  
MODESTO, CALIFORNIA

U.S.A.

Telephone LAmber 4-7395

## ADVERTISING

CB (and DXing) HORIZONS Magazine accepts commercial display advertising from bona fide manufacturers, distributors of electronic equipment and associated apparatus. Advertising rate card and coverage data available upon request.

## CIRCULATION

CB (and DXing) HORIZONS is circulated monthly through the mails and over the counter to active Citizens Band operators and shortwave listeners throughout the United States, Canada and in 71 foreign countries. CBH is recognized as "the trade and hobby publication" of 191,000 CB licensees and 95,000 shortwave listeners.

## SUBSCRIPTION

Subscription rates in the United States, Canada-\$4.00 per year. Single copies \$.40 each. Subscriptions outside the U.S.A. and Canada-\$4.00 per year. Subscription remittances should be made by bank draft or postal money order.

Airmail subscription available at \$7.00 per year, U.S. and Canada.

## TABLE OF CONTENTS

### FEATURES

A SHOCKING CONFIDENTIAL REPORT

"Radio Swan—A Method or a Madness?" . . . . . 3

IS YOUR CB STATION AUTHORIZED FOR CD OPERATION

"Citizens Radio Service Answers the CD Call" . . . . . 10

CB SHINDIG MAKES FRIENDS

"CBH Attends a CB Breakfast" . . . . . 11

A ROUND-TABLE CHAT

"What Every SWL Should Know" . . . . . 13

CB AND SUNSPOTS

"No More Skip?" . . . . . 15

LET'S RAISE THE TWENTY FOOT ANTENNA HEIGHT

"CBH Petitions FCC for Rule Change" . . . . . 16

UNDERSTANDING KEN BOORD'S REPORTS!

"Shortwave Abbreviations—Industry Standards" . . . . . 24

CBH INVADES WASHINGTON FCC OFFICES

"Our Man in Washington" . . . . . 28

WILL UNCLE SAM FOOT THE BILL FOR CB CD?

"Obtaining CB Matching Funds" . . . . . 30

A BOLD PROPOSAL FOR MARINE USE OF CB

"Riding the Channels with Marine CB" . . . . . 31

EDITOR TOM KNEITEL SPILLS THE BEANS

"Message From the Editor" . . . . . 32

PUBLISHER BOB COOPER PICKS UP THE BEANS

"Memo From the Publisher" . . . . . 39

## DEPARTMENTS

CB PRODUCTS ON DISPLAY . . . . . 8

CB ANTENNAS . . . . . 17

THE WORLD OF DX . . . . . 19

UTILITIES DXing . . . . . 26

MEDIUM WAVE DX NOTES . . . . . 27

BOOKS OF INTEREST

"CB Handbook" and "Vane Jones' DX Log" . . . . . 31

ENGLISH LANGUAGE DX . . . . . 33

BEFORE WE SIGN OFF

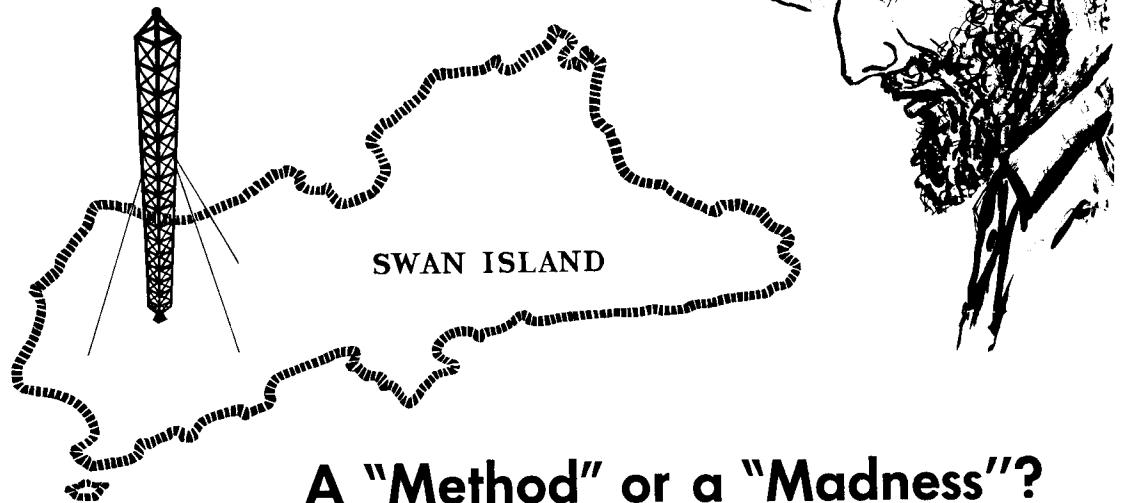
"Late-Late News (to May 5) You Won't Read in  
ANY Other Magazine Before August" . . . . . 40

CB (and DXing) HORIZONS (title registered U.S. Post Office) entered as Third Class postage in Modesto, California May 10, 1961. Second Class postage pending. All copyright and editorial rights reserved by Horizons Publications, 1961.

POSTMASTER: Send Form 3547 to CB Horizons, Post Office Box 3150, Modesto, California.

"CB (and DXing) Horizons' readers—always the first to  
know, the best informed and the first to act!"

# RADIO SWAN



## A "Method" or a "Madness"?

by Tom Kneitel, Managing Editor

Copyrighted 1961 by Horizons Publications. All rights reserved.

**QUESTION** — How can a 50,000 watt broadcasting station operate on American territory without any license whatsoever?

**QUESTION** — Why would a "commercial radio station" deliberately hinder its own chances for success (to the point where they possibly don't earn enough revenue to meet their operating costs)?

These and other questions have been asked about the world's most mysterious radio station, RADIO SWAN. Here, for the first time, are the facts about how RADIO SWAN operates, and who operates it. Why it operates? Well, let's first learn the "how's" and "who's."

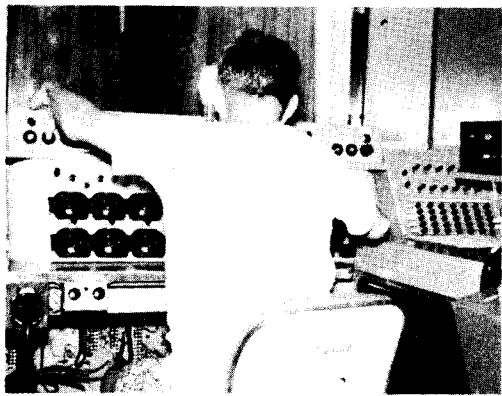
Our story begins back in the Spring of 1960. Fidel Castro had already betrayed his revolution and was licking his chops at the prospect of grabbing the lucrative American industries which had helped to support his country for years, and more recently his own revolution.

Uncle Sam, possibly so as to not further strain his already weakening inter-American diplomatic esteem, did not proceed to beam "truth broadcasts" into Cuba over the Voice of America, as was being done to Russia and the other Commie satellites. Something, never-

theless had to be done; but who was to do it, and how? Washington may or may not have been mulling over the situation at the time, but suddenly there it was—50 kilowatts worth and loud and clear—"RADIO SWAN."

And where was it operating? Right on 1160 kc.—a "clear channel"—until then occupied only by station KSL in Salt Lake City, Utah, and WJJD in Chicago, Ill. both 50 kilowatters. RADIO SWAN was, and still is, simultaneously relaying their programs on 6,000 kc. with a 7½ kw. shortwave transmitter. Listeners throughout the United States and Canada have reported hearing the station on 1160 kc., and the 6,000 kc. channel can be heard throughout the world when conditions are favorable.

The immediate question was, "Who is this station, and by what authority was it operating on the coveted 1160 channel?" It soon became apparent that the station was a fantastic bootlegger which had brazenly "allegedly found a means of issuing a license to itself" (as put by Jack Gould, *Radio and TV Editor* of *The New York Times* in his column of April 5, 1961) and had further assigned itself the operating frequency under the apparent theory



Looking into RADIO SWAN's acoustically draped studio, one of the engineers prepares to cue a tape.

that "as long as you're going to take something, you might as well take the best." Of course station KSL vigorously protested the intrusion on their frequency but their complaints fell upon deaf ears since RADIO SWAN contends that its signal pattern is beamed away from KSL. Even if it wasn't, KSL didn't have "a leg to stand on" since no governmental authorization had been given to RADIO SWAN, which still operates outside of all international broadcasting agreements and treaties. Moreover, the station claims that they are "an American commercial broadcasting station," and are attempting to line up sponsors in an apparent quest for profit.

So there it was, on tiny Swan Island, a forsaken one mile square piece of coral located in the Caribbean between Cuba and Honduras—solidly drubbing Fidel with a raft of anti-Castro propaganda and a devil-may-care attitude.

The Swan Islands (there are actually two of them) themselves were an appropriate spot on which to locate the station since their own heritage seems to be somewhat dubious. Firstly, Honduras claims ownership of the islands because under Honduras law the islands lie within their territorial waters, even though they're some ninety miles from the Honduras coast.

The United States, nevertheless, declared the islands an American possession by an act of Congress in 1863. To further complicate the situation, a Mr. Sumner Smith of Boston, Mass., says the islands are his personal property; however the means by which the islands acquired this latter status were rather vague to the people to whom DXH reporters spoke while researching this report. At any rate, the U.S. Government operates a Weather Bureau station and a Federal Aviation Agency aero-

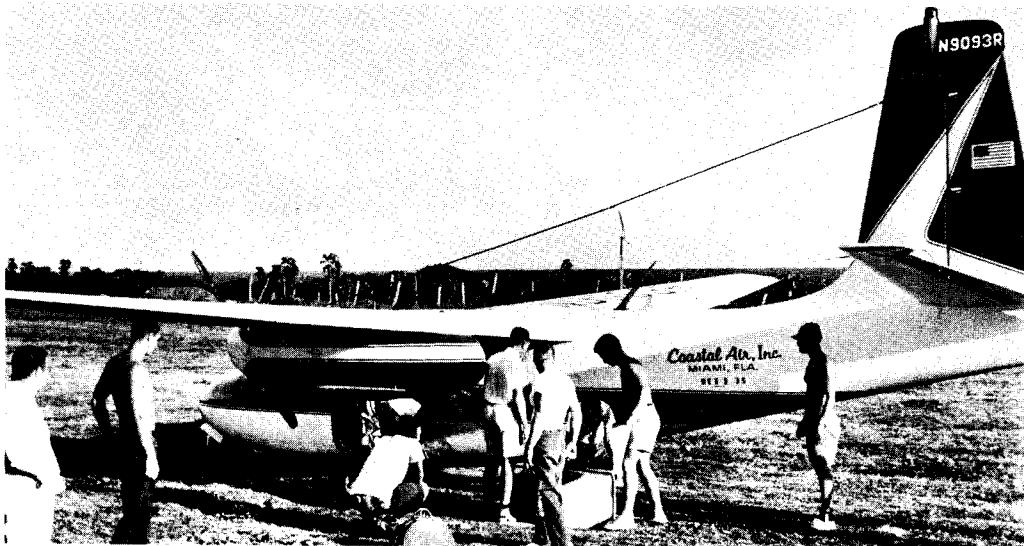
nautical radio beacon on the islands and pays rental to Mr. Smith for the use of his property. As the QSL card shown here will indicate, the U.S. Government feels strong enough about its claim to the islands to license and issue American call signs to radio transmitters located there. The FCC will likewise issue American call signs (KS4 prefix) to amateur stations operating on the island, as they did recently to American hams W3KA and W4KFC who went to Swan.

As far as RADIO SWAN goes, the Federal Communications Commission draws a complete blank. Even though the station is operating on American territory, is admittedly an American station, and is staffed by Americans—the FCC has literally "looked the other way." Station sources told us that they haven't applied to the FCC for a transmitting license because they aren't satisfied with the U.S. claim to the ownership of the islands, and that they could effectively fight the government's claim to the islands if they wanted to. They do concede that they might welcome any FCC overtures on an official basis, although they certainly would not pursue the issue themselves. Just why the FCC has neglected the station is anyone's guess, although the fact that it is a political hot-potato is a possible reason. Honduras hasn't been pushing RADIO SWAN of late, and some insiders feel that right now Honduras doesn't give a hoot about the islands or the radio station, except for their current publicity value—but when and if the islands really become valuable, Honduras will make serious claims.

Castro has been giving repeated verbal attacks on the station in the U.N., and has mentioned the situation several times in his long-winded speeches. Cubans run the risk of possible penalties for listening to the RADIO SWAN broadcasts.

Meanwhile, down on Swan, the transmitter is staffed by 15 American engineers, technicians and handymen. The (non-union) engineers are employees of The Philco Corp., part of Philco's "flying squad" of 3,000 men which the company "rents out" to private industry and the government. The Swan Island "hitch" is six months long for each of the operators, at the end of which they are brought back to the States and re-assigned. The majority of assignments for Philco come from the U.S. Navy, and the RADIO SWAN deal is a little bit out of the ordinary for them said Philco's Washington, D.C. office.

Special engineering assignments at the sta-



Coastal Air's Aero Commander usually means mail call and packages from home for the RADIO SWAN operators. Note the informal attire worn on Swan Island.

tion are tackled by personnel from A.D. Ring Associates of Washington, D.C.

Working at RADIO SWAN gives the operators plenty of time to put away some money. First of all, they get in plenty of time-and-a-half for overtime, they also receive an "Overseas Area Bonus," plus a "Hardship Area Bonus." Since there is no place they can spend money on Swan, an operator can easily save up several thousand dollars during the assignment.

While on the island the operators do a lot of fishing and swimming from the beautiful Swan Island beach in the warm blue Caribbean waters. They have a fine library at their disposal and a Community Entertainment Building where they may relax with movies, ping-pong and cards, sometimes being joined by the F.A.A. and Weather Bureau people.

Aside from some cattle and wild birds, the animal life on the island consists mainly of docile five-foot iguanas and a few small harmless snakes.

RADIO SWAN'S programs are run in both Spanish and English, and range from the anti-Castro (and anti-Trujillo) type to musical and evangelical offerings. They even carry one with the provocative name of "Secret Agent K-7." Taped in the States, most shows are flown to the island by chartered plane from a Miami air-taxi service named Coastal-Air. The flight in the twin engine "Aero-Commander" aircraft is a long one—eight hours with a stop-over at Cozumel, Mexico. The small landing strip on the island is very poor and is usually

covered with wandering cows.

The news shows are prepared in New York by Radio Press International, a live news subsidiary of local New York station WMCA. They are relayed to RADIO SWAN via short-wave radio each day over RCA transmitters on Long Island, N.Y. As we go to press the RCA schedule with Swan is as follows:

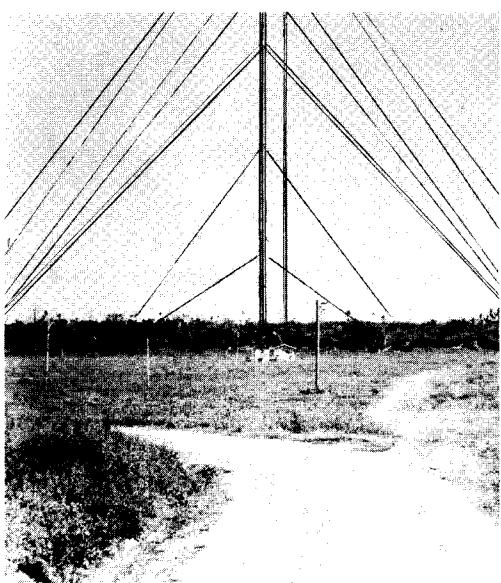
2130-2200 GMT WEU40 20820 kc.

2215-2255 GMT WER98 18910 kc.

The transmissions are in double sideband AM, although tests have recently been conducted with 60 kw. SSB.

Until March 27th the Spanish news broadcasts were narrated by Luis Tangara, well-known Latin American radio personality who made his success in Argentina until he fell into Peron's disfavor. English newscasts are made "by any of the Radio Press International men who happen to be around at news time."

The food, supplies, diesel fuel for the generators, and heavy equipment for RADIO SWAN (and also the U.S. Government installations on Swan) are transported by sea on vessels of The Hamilton Brothers Steamship Co., of Tampa, Fla. Regular vessels on the Swan run are three ex-United States Navy LCI's which fly the flag of Honduras, they are the M/V's DON EMILIO B., TROPIC SEA, and TROPIC WIND. While in the vicinity of Swan Island they maintain radio contact with the F.A.A. station on 2738 kc. There is a small pier on the island, but docking conditions are so bad that one of the 157 foot LCI's recently knocked a blade from its starboard screw while



RADIO SWAN's medium wave transmitting towers are 240 feet high, apparently base loaded half wave jobs. Each is heavily guyed for hurricane duty.

attempting a landing. Although Castro is reported to be offering a reward to anyone who shoots down the plane serving Swan Island, he seems to be ignoring the ships which go there every ten days, possibly because when Batista's planes bombed and sank a Hamilton Bros. ship (the M/V BABE) in 1953, the company hit Cuba with a bill for \$100,000 (they're still waiting for their money).

In line with RADIO SWAN'S commercial aspirations, they have made arrangements with a well-known New York company, The Pan American Broadcasting Co., to handle their "time sales" to sponsors. *Pan American Broadcasting* is headed by Mr. Walter S. Lemmon, a former contractor of the U.S. Information Agency.

Despite the fact that RADIO SWAN claims a listening potential of 6,000,000 radio equipped homes in their coverage area, their commercial rates are unrealistically low. In fact, *sufficient revenue has not yet been earned for the station to reach its break-even point.*"

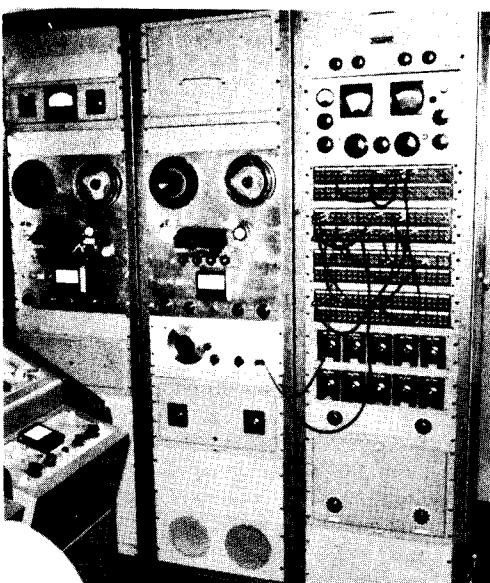
Compare RADIO SWAN's top rates with the top rates of the following broadcasting stations:

	One 1-min. spot	One 1-hour program
RADIO SWAN	\$24	\$175
WHOM	25	350
WEVD	60	550
WLIB	30	300

The stations used for the rate comparison are

in New York City and cater to specialized limited markets. To give you a better understanding of the meaning of the figures, remember that RADIO SWAN claims a listening potential of 6,000,000 radio equipped homes (so you can multiply the six-million by three or four listeners in each home), while WHOM, which runs all foreign language broadcasts, bases their rates on a complete listening potential of 2,103,730 *listeners*. In other words, RADIO SWAN can reach an audience nine to twelve times larger than WHOM's, they have a 50 kw. broadcast transmitter and a 7½ kw. shortwave relay, and yet their top rates are fifty per cent less than 5 kw. WHOM's. And note that the RADIO SWAN audience potential figures *do not* take into account the number of radio equipped homes in Florida, which they blanket with their "primary coverage," or in parts of Alabama, Louisiana and Texas which fall in their "secondary coverage" area.

O.K., so Castro's Miami based foes can buy time on RADIO SWAN at bargain rates; so what? The "what" is that several "big" potential sponsors started negotiations for time on RADIO SWAN and did a hasty retreat when they found out that they'd be selling their products on a station carrying a trunkful of political propaganda broadcasts. One of these "almost sponsors" is America's most famous



This is the equipment used at RADIO SWAN to monitor and record transmissions from stateside transmitters. Shown here are Ampex tape decks, Hammarlund Super Pro receiver and "patching board." This equipment is some of the best on the market and very high priced.



U.S. claims to Swan Island are substantiated by these two pieces of mail. The WSG QSL card (note American call letters) was mailed in 1950, the special RADIO SWAN letter was posted on March 17th, this year. Both bear U.S. stamps."

maker of canned and prepared retail food products, a prime big money account which any other radio station would do nip-ups to land. Yet RADIO SWAN continues their claims to be a station striving for commercial profit.

As of this writing, the few sponsors who have bought time on RADIO SWAN include the R. J. Reynolds Tobacco Company, Radio Bible Class, Accion Cristiana Dominicana, The World Tomorrow, Philip Morris Company, Por Cuba & Para Cuba, Frente Revolucionario Democratico, Kleenex, and Lincoln Institute. News broadcasts are sponsored by "the Cuban Freedom Committee of an American anti-Communist Foundation known as the Christianform." Pan American Broadcasting informed DXH that as far as RADIO SWAN's political sponsors are concerned, they (Pan American) are not involved, as these accounts are handled by the station directly.

Obviously the management of RADIO SWAN must have the proverbial "method to their madness" (or "apparent" madness, anyway), so DXH decided to try to find out what it was. Frankly, digging up the data on who and where the management is was somewhat of a problem.

Owned under the corporate name of the *Gibraltar Steamship Company* (it doesn't own any steamships, by the way), the station maintains headquarters in New York City at 18 East 50th Street, in an unused part of *Radio Press International's* offices, although they nor-

mally receive mail at P. O. Box 1247, General Post Office, New York, N.Y. Mr. Horton H. Heath is the Commercial Manager of the station, and Richard S. Greenlee, Esq., of the law firm of Kramer, Marx, Greenlee & Backus, 29 Broadway, New York 6, N.Y., is the station's attorney.

*Apparently the people actually in control of the station are outside the New York area.*

We were surprised to hear that Mr. Sumner Smith ("owner" of the Swan Islands) was connected with the station, although he told DXH that he was not an *owner* of the station—only a Director, and since he hadn't been too "close" to the station of late he wasn't even sure he was still a director. He did say that RADIO SWAN had a renewable lease for using Swan Island (as do the U.S. Government installations), but he did not recall the terms of the lease.

A second reported official of the station was named as Walter Orr, of Baltimore, Md., whom we could not locate.

The third person alleged as being behind-the-scenes at RADIO SWAN was Mr. Thomas Dudley Cabot, of Boston, Mass. Mr. Cabot is a direct cousin of Henry Cabot Lodge (*who was U.S. Ambassador to the United Nations when RADIO SWAN took to the airways*). *Mr. Cabot is a former Director of the Office of Internal Security at the U. S. Department of State and also a former President of the United Fruit Company.*

*(Continued on page 35)*



*Miratel* is a name well-known in the television monitor industry. The firm's entry into the Class D CB market was quiet and unobtrusive. And then came the dawning.

A Class D CB rig with .5 uV sensitivity, 4 kc. IF bandpass and a MECHANICAL FILTER!

*OK...so wot is a mechanical whatchamaycallit?* And why do you need one in your CB rig?

Good question. Ham types know that the Mechanical Filter is a device in the circuitry of *Collins Radio* receivers (75A, 75S series) which allows the operator a fantastic measure of receiver selectivity uncomparable to most other methods of selectivity.

In a CB rig, a mechanical filter properly designed into your receiver will allow you to listen (for example) on channel 2 while strong local 5 watt types are transmitting on channels 1 and 3. In other words, it affords the user a measure of selectivity not found in more conventional circuitry.

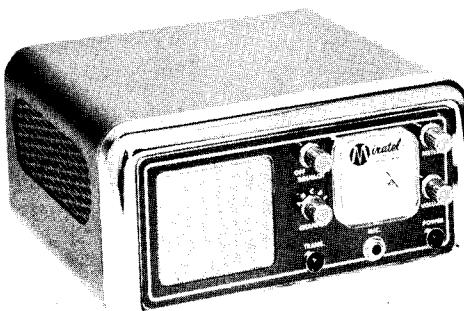
This is not to say the CR117 will run circles around all other rigs on the market. Nor is this to say that the mechanical filter antiquates all existing types of receiver IF selectivity circuits in CB units.

In simple terms, the mechanical filter is great! It is a useful accessory to CB when there is a need for it. If you have a need for it in your particular installation, then it is for you.

The *Miratel CR117* provides reception on five crystal controlled channels. The receiver is superhet type, with two 455 kc. IF amplifier stages. Tuned circuits are inductively coupled to insure selectivity and image rejection. The squelch opens on .25 uV and the sensitivity (to provide a 20 db signal to noise ratio) is "better than .5 uV" according to the manufacturer.

About the transmitter. It has lots of "drive

power" as the CR117 uses a 6CL6 oscillator. The final is another 6CL6. The modulation is clean and crisp, and very much "communications quality." Modulation is class "B" with 7.5 watts of audio talk power available for the 5 watt carrier. Yes... *it has lots of audio!*



**Miratel CR-117**

A little bit about *Miratel*. The name stands for "*Minnesota Radio and Television*." The engineer who designed the unit is a partner at *Miratel*, Bill Saddler. Bill's experience in communications equipment is about as extensive as anyone we have ever met (we visited the Minneapolis plant in April). One of his minor feats involves a "Ham TV station" he put on the air in San Francisco in 1947, two years before commercial television came to that city!

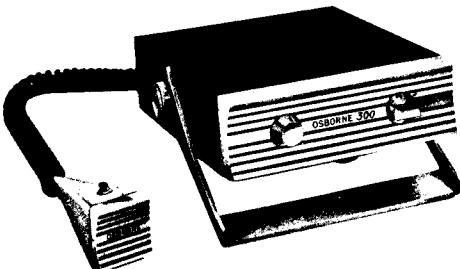
Want more information about the CR117? Write *Miratel, Inc., 1st S.E. and Richardson, New Brighton 12, Minnesota.*



**New EXEC 100**

Bet you've never seen one of these babies yet—it's the brand new "Exec" from *International Crystal*—sort of an "Exec" gone high-hat. It's the EXECUTIVE MODEL 100, not

even available yet (it will be after June 15). No less than twelve transmit channels and a crystal filter receiver make it a "fantabulous" rig. And watch for *International's EXECUTIVE MODEL 10*, a genuine "Exec" with a tunable superhet receiver for a rock bottom price.



New Transistorized Osborne 300

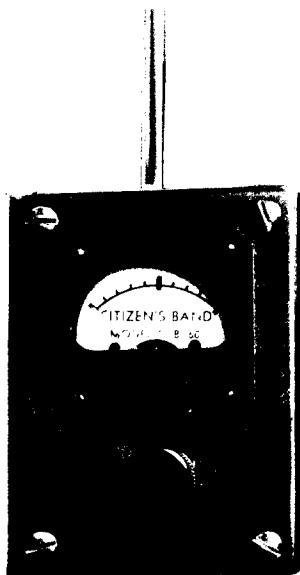
*Osborne Electronics Corp.* (13105 Crenshaw Blvd., Hawthorne, Calif.) has just announced a nifty pint-sized transistorized dynamo called the Model 300 Class D transceiver. Works on any voltage, superhet inhaler, four channels, squelch, ANL—the whole bit weighing in at *only four and three-quarters pounds*.



Webster's Model D Mounting Kit

This interesting looking array of hardware is Webster's Model "D" insulated base mount designed for mobile installations on the bumper pan or rear deck of an auto, or as a deck mount for boats.

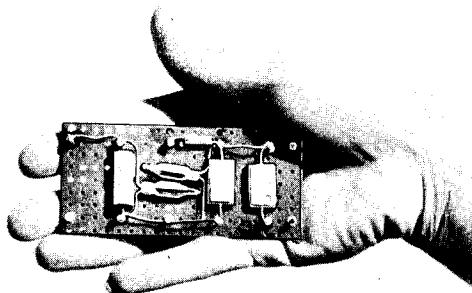
The novel thing about the mount is that it comes with a PL-259 coax receptacle, unusual in the fact that most mobile mounts are difficult-to-attach soldering-lug affairs. Webster's address is 317 Roebling Road, South San Francisco, Calif. By the way, we hear that Webster isn't talking yet about a *fantastic* super signal



Penn Electronics Field Strength Meter

mobile whip they've got. We hope to have a scoop on this next month.

In the field strength meter department, *Penn Electronics* (26-28 E. Main Street, Plymouth, Pa.) has a gadget called their Model CB-60 which is not only pocket sized, and rugged—it checks relative field strength, modulation, antenna pattern and indicates relative transmitter output. It's not a kit.



Two Tone's Q-BIRD

This handful of electronic magic is called a "Q-Bird," although the model in the photo is only a prototype model (the unit is so new that the manufacturer, *Two-Tone Electronics*, doesn't yet have a photo of the production model). Placed easily in the circuit of any transceiver, the *Q-Bird* will enable you to transmit the wierdest signaling tone you ever heard. Really cuts through the static and hash to let another station know you're there. Two-Tone's address is 948 N. Spaulding, Hollywood 46, Calif.

(Continued on page 31)

# THE CITIZENS RADIO SERVICE

## ANSWERS THE



# CD CALL

by Tim Huntley  
Communications Staff Coordinator  
Office of Civil Defense  
City of Los Angeles, Calif.

All Civil Defense planning is concentrated on just one thing—survival. To this end there is much planning — planning which depends greatly upon adequate communications. Of course, communications is an extensive and varied field, and normally Civil Defense relies upon those communications services which already exist in the Public Service, Special Emergency and Governmental radio services. However, when these services are exhausted, or just plain non-existent we must depend upon volunteer communications—such as R.A.C.E.S., an organization of Amateur Radio Operators.

One new tool has now been added to the Civil Defense tool-chest, the Citizens Radio Service—a service which although started less than three years ago has grown at such a fantastic rate that in three years there are already more CB transceivers licensed than all the amateurs *in the world*; and amateur stations have been accumulating for about *fifty years!*

So we've got ourselves a "valuable tool," *good!* But the tool is not without its problems. Problem "1" being that there are a number of mis-uses of the service itself, problem "2" being that CB'ers, for one reason or another, aren't quite certain as to how CB is to be used in connection with Civil Defense.

It's yesterday's cold hash to talk about the fact that a small percentage of CB'ers in a locality can make the band hell-on-wheels to communicate over because of their incessant

and unimportant "chatter." We won't go too deeply into that here, but take it from one who knows, it's hard to depend on getting a message through when you don't know if a rag-chewer with a better signal than yours is going to be sitting on your channel for a few hours.

The second problem is with the understanding, or *mis-understanding*, of how CB fits into CD in the eyes of the FCC.

Due to differing rule structures, the Amateur stations connected are permitted regular weekly "check-ins" to CD "nets," while (*and this should surprise, even shock many*) CB stations *are not!*

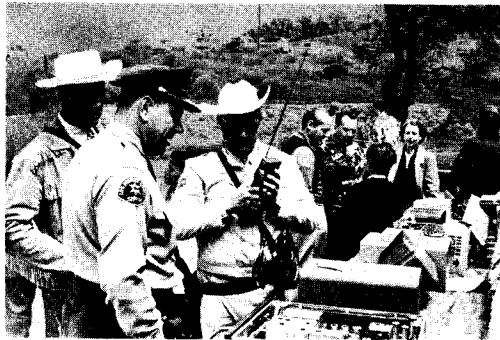
There is nothing in the CB rules which is comparable to the hams' "roundtable," and *any regularly scheduled* weekly (or whatever) 27 mc. net check-ins are *definitely not permissible*.

CB participation in CD *is* permissible, however (under Part 19's regulation permitting CD service) when 1), CB is affiliated with a bona fide official CD operation of the city or state, and 2), when it is used to supplement and aid CD operations in such a way that the messages handled are incidental to some regular function of CD, other than the R.A.C.E.S. type of message handling operations.

The only time CB stations may check into nets is when they are requested to do so as part of an overall organized drill which includes amateur stations, official CD control stations, etc.

In other words, CB communications in behalf of CD should *not* be for the sake of "communicating and traffic handling" but for the sake of aiding CD functions such as Courier Service, Auxiliary Police, etc. —T.H.

# CBH ATTENDS A CB BREAKFAST



On April 23rd the hottest CB shindig ever to hit the West Coast took place high in the mountains of the Angeles National Forest. Held at the Sandberg "Town for Lucky Children," a picturesque group of wooden buildings about 5,500 feet above sea level, the "CB Breakfast" attracted hundreds of CB'ers, manufacturers and distributors from throughout not only California but from the entire Southwest.



This rugged looking guy is Lucky Stevens, movie actor who operates the Sandberg. He's 11W8457 too.

Emcee for the gathering was Lucky Stevens, 11W8754, movie actor and stunt man who purchased the Sandberg in 1951, rebuilt it,

and turned it into a non-profit camp for underprivileged children. In fact, the purpose of the Breakfast was to raise money for the camp's operations this coming summer.

There is no doubt the affair was a smashing success—the parking lot was so jammed with CB mobiles that the antennas made it look like a large porcupine.



Lou Ellis, 11W3242, poses with Tom Kneitel, 2W1965 (Managing Editor of CBH) as he receives one of the first sample copies of CBH.



Here's the Radio Product Sales booth at the CB Breakfast. Campbell L. Wilson of RPS is showing one of the Globe handi-talkies he brought along.

The CB'ers who attended the gathering were mostly from the *Southern California 11 Meter League*, a very active group from the Los Angeles area, although we did spot a 5 Watt Wizard or two.

Lou Ellis, 11W3242, president of the *Southern California 11 Meter League*, really made us feel at home and welcomed CBH as "the greatest thing in the world for the CB

operator." He said, "We want to adopt CBH as the official magazine of our League." Naturally we were pleased to get this reaction, which was repeated all during the day by just about every one of the gang to whom we spoke.



Southern California 11 Meter League window sticker... a real beauty!

George Seaman, 11W7774, said, "It's time CB'ers had their own magazine because CB

coverage in other magazines just isn't adequate to meet our growing needs."



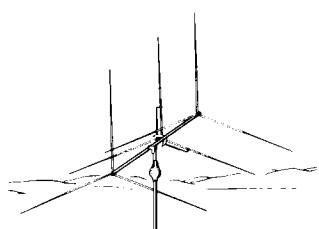
Ron Schiller, designer of Marina's "Buddy TX-11" CB transmitter poses with his brain child.

Among the manufacturers who displayed their wares, we spoke to Bud Jones of *Marina Communications*—manufacturers of the "Gizmotchy" 11 meter beam. Bud has donated one of these interesting beams to the camp and as one was installed there we had a chance to see it in action. "Wow!" is about the best short description of the "Gizmotchy!" We heard from one satisfied *Gizmotchy* user who worked his second unit over a ground wave range of 107 miles!

*Radio Product Sales* of Los Angeles had Ken Rausin and Campbell L. Wilson showing off the new and fantastic *International Crystal Mfg. Co. EXECUTIVE 50* dream rig, a winner if we ever saw one. They also demonstrated the nifty *Osborne* transceiver, another hit-of-the-show. The *EXECUTIVE 50* was donated to the camp.

All in all CBH came away from the CB Breakfast with a feeling of admiration and awe for the great work being done by the 11 meter operators throughout the southwest. We heard report after report of actual emergency functions performed by these "Citizens of the Airwaves" and we ourselves could see that if these fellows represent a sampling of CB'ers throughout the country, our service will indeed continue to grow and grow.

Annual Picnic for the S. Calif. 11 Meter League is Sunday, May 28th, at Brookside Park, Pasadena, Calif. All CBers are invited. Fun—games—displays—exhibits!



### GIZMOTCHY 2 IN 1 CITIZENS BAND BEAM

A flick of the switch from  
Horizontal to Vertical Beam

A Versatile and Powerful Boost  
for Direct Communication

ONLY \$55.95

VERTICAL BEAM — Only \$44.95

BUDDY WHIP for the Best  
CB Performance in Your Car — \$19.95

ANTENNA SELECTOR BOX — \$7.50

Send for Free Literature

Manufactured in Culver City for CBers

**MARINA COMMUNICATIONS**  
10328 VENICE BLVD. • CULVER CITY 1, CALIF.

# What Every SWL Should Know



## WHAT MAKES A GOOD DXER

DXers are a great bunch for expounding theories. Give a DXer five minutes and he's liable to lecture you on anything from static to Nibi-Nibi. One of the main topics on the DX crackerbarrel is always "what makes a good DXer?" We've heard specifications galore, so we decided to call together a "grand council"—a sampling, as it were, of DXers who are representative of the hobby. Our council would kick the subject around once and for all.

Invited to sit around the DXH listening post were the following members of the DXing fraternity: *August Balbi*—the "dean" of DXers (someone suggested that August invented DXing), and *Ken MacNeilage*—a relative newcomer to the hobby (1958) who, in a short period of time, has risen to the hobby's highest echelons. Also invited was *George Cox*—one of the most well-known and active DX-perts on the SWBC and BCB bands, and *Hank Holbrook* whose achievements in snagging and QSLing LW and MW stations are no less than astounding.

So here they sat, a cross-section of the hobby. The DXH moderator started the ball rolling:

**DXH:** "*August, as a veteran of many years of DXing what would you consider to be an important ingredient in the makeup of a DXer?*"

**BALBI:** "Patience, if you try for a station several times and can't seem to get a definite identification, keep trying the frequency for several days either earlier or later and chances

are you'll get a lucky break someday and be able to get a positive ID."

**COX:** "I agree, August, patience is the single most important factor in DXing. I listened for several years before logging Afghanistan, Uganda and many other elusive countries. A station 'in the mud' one day may be at good level the following day or week. I seldom get discouraged by unusually poor conditions caused by sunspot storms or local QRM, I realize it will soon be over."

**DXH:** "*How about you, Ken?*"

**MAC NEILAGE:** "There's no doubt that patience is rewarding in this game. Really good DX doesn't come easy to anyone, even the guy with the million dollar receiver and miles of skywire. He's still got to wait and strain the earlobes listening for the weak signals."

**HOLBROOK:** "I think that a DXer should settle on one band and concentrate on getting to know each station operating there. Eventually, with patience, you find out what 'out of town' stations regularly visit your location. When you start digging under these stations you'll find a real DX."

**DXH:** "*When you finally get the rare DX station though, isn't it sort of an anti-climax to let everyone else in on your 'private treasure'?*"

**COX:** "One of the greatest satisfactions in the hobby is to hear from a DXer who has an entirely different location from your own and share his tips and opinions. I enjoy corresponding with several American and Foreign DXers."

**DXH:** "*Hank, do you find that published DX tips from other listeners have helped you find rare stations?*"

**HOLBROOK:** "Sometimes, for instance, I'll be listening on BCB and I'll hear the Latin Americans coming through. The first things I reach for are my copies of club bulletins and DXH to go after the stations reported by other DXers."

**BALBI:** "I always keep a list of tips gathered from DX sessions and publications, handy. My lists are kept for hour-by-hour monitoring, although some of the boys like to keep them by frequency."

**COX:** "Keeping up to date on stations is greatly helped by publications, August, but I find that many changes such as new stations and frequencies are discovered firsthand at the dials of my receiver."

**BALBI:** "True, but it always helps to get every kind of information available from clubs,

publications like DXH and over shortwave stations' DX broadcasts."

DXH: "What happens when you hear a station that doesn't show up on any of the lists? I mean, suppose it's a station you think you're hearing on a frequency where it doesn't belong?"

BALBI: "You've got to keep an open mind since changes happen daily and are often made without any advance notice."

HOLBROOK: "Yes, but you can't jump to conclusions either. For instance, when you send the station a report you must be fairly certain that the station you are writing was the one you heard."

DXH: "But, Hank, if you send a 'wrong' report to one of these stations doesn't it give the hobby a 'black eye'?"

HOLBROOK: "Well, you've got to tell them that you aren't *sure* you heard them, but you've got to include adequate information in your report so the station can ascertain if it actually was their station you heard."

DXH: "Can a 'false' report be sent?"

MAC NEILAGE: "Some, very few in fact, have learned that false reporting can never raise a DXers status in the hobby. A single bad report can do great damage, not only to the guilty reporter but to the entire DXing hobby."

HOLBROOK: "That's true, Ken, you can't let your imagination run away with you. Many so-called 'false' reports though were actually poorly identified foreign stations. If you're reporting to a foreign station give special attention to call letters, slogans, sound effects, chimes and musical selections heard."

MAC NEILAGE: "And when you do send reports, the program information should be really detailed to the point where the reports are actually useful to the station which receives them. It's important that the station engineer will have a good impression of the DXer and DXers as a group."

DXH: "Hank, what would you say makes up a good report, based on your experience?"

HOLBROOK: "Well, besides the detailed program information which Ken mentioned, you should describe your equipment, the time the station was heard (in GMT), the signal strength, readability, interference from other stations, static, overall reception of the station as compared to other stations in his area heard at the same time. And always request a verification—never demand one. Some DXers forget that the station does them a favor in answering their reports. Oh, and be sure to keep your

report as neat as possible and be sure to include return postage in the form of International Reply Coupons or uncancelled stamps of the country in which the station is located."

DXH: "Do you keep a record of the stations you pick up, George?"

COX: "That's a good one to ask me, I have a record of every station heard at my station since I began DXing in 1948. It fills 21 log books. Frequently I refer back to old frequencies used, check when unusual DX occurred, or look to see the last time a station was heard. It's pretty interesting to compare monthly and yearly reception in relation to the 11-year sunspot cycles."

MAC NEILAGE: "Sunspots, aurora, and other causes of interference should be understood by DXers. Every successful DXer has a complete record of all DX logged at his station, as well as detailed information pertaining to the signal received."

DXH: "Hank, when you've sent out the detailed and neat report, made a fancy entry in your station records and receive no answer from the station what do you do, give up?"

HOLBROOK: "Not really. Some stations just won't verify a first report. I wait three months and then I send a copy of the original report. Sometimes I even include a prepared card for them to send back to me. I'd suggest including return postage again with the follow-up report."

DXH: "Is it possible that they just didn't understand your report?"

HOLBROOK: "Well, I always try to make my reports as concise as possible. For instance, I know that many DXers use signal codes. I have never believed in this because I don't think many stations are familiar with them. I always describe in words how the signal was received—weak, fair, fairly good, good, fairly strong, or strong. I like to assume that my first unanswered report may have been lost in the mail."

DXH: "Do you send the reports in English?"

HOLBROOK: "When writing to a foreign station I try to use a report in their own language — especially to Spanish stations. Many DX clubs can furnish these forms to their members."

DXH: "How about 'DX cards,' or 'SWL cards' as they are sometimes called?"

HOLBROOK: "They're OK if they permit sufficient technical and program detail and are mailed in envelopes so return postage can

(Continued on page 34)

# CB and SUNSPOTS

# NO MORE SKIP . . . INTERFERENCE?

When the Class D Citizens Radio Service was established in 1958 the early users of the band were shocked and perhaps pleasantly surprised to hear distant Class D stations "blasting in" stronger than locals two blocks away. The "skip effect" was quickly pinned down as a (mostly) daytime phenomenon and the knowledgable types on the air told you it had something to do with the sun's spots (measles they guessed).

As more and more Class D stations took to the air daytime interference became nearly intolerable. The more crowded channels were useless and the DXing fad among CBers caught on. *Who would be the first to work all twenty-four call districts?*

And then the FCC stepped into the picture with a decree. *"Class D stations were licensed to talk to other Class D stations . . . BUT . . . only to those directly licensed to the licensee."* In other words if you were 25W0001 you could talk with 25W0001—Mobile Unit 1, or Mobile unit 2, but not 1W0001 or any other "foreign sounding" licensees. The Commission said it did not want the 27 mc. band to become just a "no license ham band" and the decision on "working DX" was along these lines.

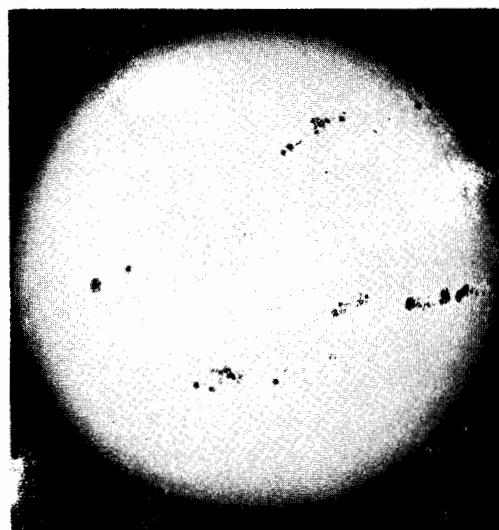
But despite the best influence of the Fox Charlie Charlie "Old Man Sol" continued to crank out the sun spots (a real bad case of measles!) and the 5 watt Class D licensed stations continued to hear one another 500, 1,000 and 2,500 miles distant. The temptation to "give that fellow in California a quick call" was overwhelming in many cases, and rumors persist about a Class D operator in New York City who boasts twenty-three call areas confirmed on 27 megacycles (he has never 10-4'ed Hawaii).

Regardless of how you stand on "DX" you can't help but have noticed that "the band ain't all she used to be." If your operation is strictly legit and you have no use for skip (which is as it should be) then you are probably pleased that the skip is waning. Stations close in to you (between 500 and 1,500 miles) are heard less often while stations 1,200 to 2,500 miles are heard more frequently.

And you have noticed that skip stations show up later in the morning and last not as

long in the afternoon. *WHY?*

Well it goes like this. Sun spots are strange disturbances on the surface of the sun which radiate an unknown quantity of material into space. When there are lots of sunspots there is lots of material radiating around. And the more of this material around the more of it lands in our *ionosphere* (layers of rarified gases existing 40-200 miles above the earth). The 27 mc Class D signals (along with all other high frequency radio signals) shoot away from our antennas and enter the ionosphere. IF there is sufficient radiation present from sun spots in the various ionospheric layers our 27



Take a last look at the sunspots. They may never be this photogenic again.

mc. signals bounce from the latter and back to earth. The distance from our home station to the distant point where the signal lands is called the *skip zone*. Hence the term "skip."

All of which points up to one fact. When there are lots of sunspots the ionosphere does lots of skipping of our signals. As the sun spots disappear, so does the radiation. And so does skip.

*Or almost . . .* more about a seasonal type of skip—with us year in and year out as CBH looks at sunspots and skip (interference) as it affects the 27 mc. Class D band, again in July.

R.B.C.

# CBH PETITIONS FCC FOR CB RULE CHANGE

CBH has gone to bat for CB'ers by being the first publication to petition the FCC for a modification of Part 19. We feel that the change we propose will result in considerably better communications on the 27 mc band, and we ask your support in this action.

Don't drop the ball, help us carry it by filling out and returning the coupon below. Do your share in bettering the band. Acceptance of our proposal by the FCC will be one step closer to CB'ers establishing the "voice" with the FCC which they so urgently need. Paste the coupon below to a post card and return to us.

To: The Federal Communications  
Commission  
Washington 25, D.C.

April 10, 1961

From: CB Horizons Magazine,  
Box 3150,  
Modesto, California

Subject: Modification of FCC rules, Part 19

This is a formal request to change the height restriction as relates to the antenna being 20 feet above the height of an existing object, to a height limit of 30 feet.

Reasons offered for this proposed rule making are as follows:

The present rule does not allow for development of efficient vertical antennas consistent with good engineering design at the 27 mc frequency. Ground plane antennas and verti-

cal coax sleeves, for best match and lowered angle of radiation, require isolation stubs to keep the horizontal angle of radiation constant in reference to the horizon.

A coax sleeve type antenna, for example, takes a mechanical length of 18 feet for efficient design. In order to mount this antenna and be assured in advance that the pattern will not be effected by ground environment, another quarter wave isolation skirt should be affixed to the underside of the antenna. This additional 8 feet, plus the 18 for the antenna and a foot or so for mounting hardware, requires the tip of the antenna to be at least 30 feet from the top of the building or mounting surface upon which it is fixed to.

Other types of antennas, such as vertical yagi type beams, require at least a quarter wave under the bottom of the lower element in order to assure proper performance, clean patterns and reduced skywave radiation. A 30' height would allow the installation of this type of antenna with assurance that the antenna would function as designed.

A possible objection which could be offered for such a change, is that because of increased antenna height, the interference from various Citizens Radios would be increased. CB Horizons is keeping this factor in mind by only requesting the minimum additional height in order to allow effective use of antennas and antenna design as relates to the frequencies used for this service. Direct calculation of the increased ground wave coverage by moving the antenna 10 feet higher than that at present allowed, would only increase the distance to the horizon by one mile, for the average installation. It is felt this small amount of additional range will not cause sufficient ground wave interference over that already existant to warrant refusal of granting this request.

The improved radiation patterns possible through granting this request, however, will go far towards reduction of interference, especially from skywave propagation as the angle of radiation will be lower for many types of antennas. The increased height will encourage the use of directional antennas which have heretofore been difficult to erect without violation of the rules and regulations. The extensive use of such antennas will tend to reduce interference and allow the use of the band as intended by the FCC, for business and private short distance communications.

CB Horizons firmly believes that in the interests of public service and for improvement in the state of the art as concerns proper en-

(Continued on page 34)

Robert B. Cooper, Jr., Publisher  
CB Horizons Magazine  
P. O. Box 3150  
Modesto, Calif.

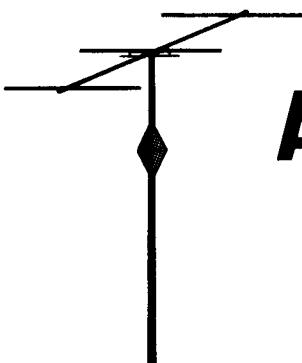
Dear Bob:

I support CBH's petition of April 10, 1961, in which it is proposed to modify the FCC's Part 19 to change the permissible antenna height from 20 to 30 feet.

Name \_\_\_\_\_, CB Call \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_, State \_\_\_\_\_



# ANTENNA

## TOPIX

### ENGINEERING YOUR SYSTEM Art Brothers, 11WO759

One of the major requirements on CB is range and one of the easiest ways to get it is through antenna height. For Citizens Band applications, the optimum economical height has been determined to be 50 to 60 feet. At these heights, which are not very hard to obtain with most users, the signal will travel between nine and ten miles before it reaches the horizon, assuming no trees or obstructions are in the way.

One of the easiest ways of determining how far your CB system *should* work, is to figure the horizon range from the height of your antennas. If your own system does not cover the range shown in this table, your own system is not functioning properly and could use some working on.

TABLE 1: Distance to horizon in miles from top of pole measured in feet from ground level.

1'	1.3 mi	70'	11 mi	500'	29.4 mi
10'	4.2 mi	80'	11.8 mi	1K'	41.6 mi
20'	5.9 mi	90'	12.5 mi	2K'	58.9 mi
30'	7.2 mi	100'	13.2 mi	3K'	72.1 mi
40'	8.3 mi	150'	16.1 mi	5K'	93.1 mi
50'	9.3 mi	200'	18.6 mi	10K'	131.7 mi
60'	10.2 mi	300'	22.8 mi	15K'	161.3 mi

From the table and diagram one it becomes easy to understand why the fellow on the hill gets out better than the guy down in the gully, as on CB, with five watts, the signals are just about line of sight as far as range is concerned. Thus, if you were operating CB in an airplane, your coverage area at 10,000 feet would be anywhere within 131 miles.

Let's assume your antenna is at the 60' level.\* For these figures take the mid-point of the antenna please, not the tip-top inch. From the table we see the range to the horizon is 1.2 miles. To a mobile the range would be increased as his antenna is mounted about seven feet in the air which reaches a distance

of over 3.5 miles. So, to a mobile you should have line of sight contact for 13 miles.

Of course, there is a catch to this. Our line of sight doesn't happen in the city where we have trees and buildings on the horizon and we also have to contend with ignition and other noises. However, if all other factors of your systems are in good shape, as a general rule, you should work out to the range of your base station. The height of the mobile antenna combined with the five watts of power will counter the effect of "*horizon clutter*" caused by trees and buildings.

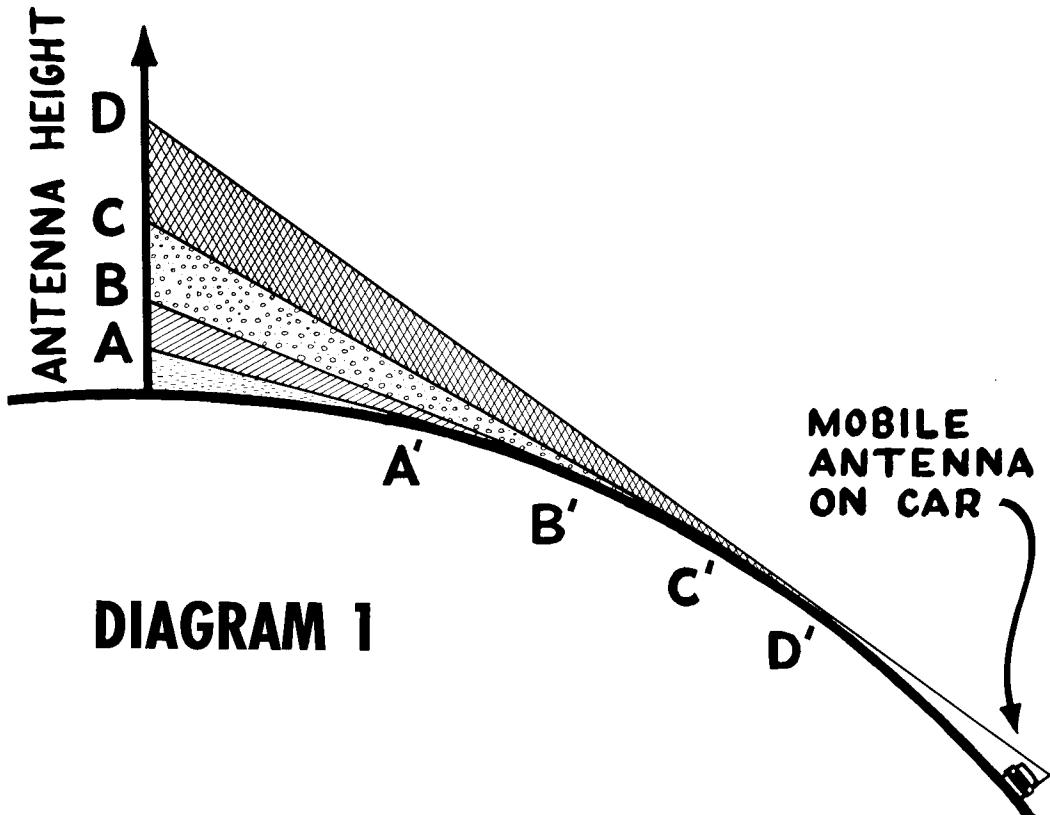
If no clutter existed on the horizon, you probably could, in a noise and interference free area, work the 13 miles with 100 mw handie talkies, low output and all. With five watts, you could add twenty per cent to this range and still communicate.

The above discussion is predicated on the use of an omnidirectional antenna or ground plane, as the base station antenna. Additional gain, expressed in db, is possible by using different types of antennas in different combinations.

#### What is a "db"?

Let's dispose of this "db" thing right here and now! Like a woman, a db is generally spoken by all and sundry as something we understand and know. But also like women, very few really know much about the elusive db. To over-simplify the definition, a db is a convenient method of expressing power.

Take a look at table two, even though it might not be entirely clear to you right now. Keep it as you will need it next month to calculate the gain of your antenna. It should be noted that a gain of three db doubles the power. A six db gain antenna increases power just under four times. Thus, if you were to use a six db beam antenna and your transmitter delivered three watts *output*, your effective power output would be four times three watts,



**DIAGRAM 1**

*How Height Affects Our Coverage—The obvious direction for increased coverage is UP...the FCC and landlord willing!*

TABLE TWO: DECIBELS vs VOLTAGE AND POWER					
Voltage Ratio	Power Ratio	db	Voltage Ratio	Power Ratio	db
1.00	1.00	0	3.59	12.59	11
1.12	1.26	1	3.99	15.85	12
1.26	1.59	2	4.47	19.95	13
1.41	2.00	3	5.01	25.12	14
1.59	2.51	4	5.62	31.62	15
1.78	3.16	5	6.31	39.81	16
2.00	3.98	6	7.08	50.12	17
2.24	5.01	7	7.94	63.10	18
2.51	6.31	8			
2.82	7.95	9	8.91	79.43	19
3.16	10.00	10	10.00	100.00	20

or *twelve watts output*. This would be the same as operating your rig at *twenty watts input*.

Consider then, what would be your effective power output if you ran your three watts of output power into an antenna which had 14 db gain? If you said 75 watts *output*, you would be correct! If you were rich enough to afford a 20 db Citizens Band antenna system (Telrex-\$995.00 FOB factory), you could jack your three watts output up to an effective power output of 300 watts.

Consider now, the difference your effective power would make in the 20 db system if your transmitter were only putting out two watts. With two watts (which is the *average* output power of CB units now on the market), your total radiated power would be just 200 watts. With 3.5 watts you would have an effective 350 watts.

Leaving this dream world and getting back to the present logic that any system will work best when the signal is directed *towards the station* to be communicated with. Generally speaking, it is safe to assume these stations are on the ground, or straight out from our antennas to the horizon. Most antennas do not place the signal on the horizon, but fling the major portion of the signal *up* in the air. In fact, the signal received by the mobile or other base station is generally only half of the total signal sent in the general direction of the receiving station. Being half, it is three db down. (Refer back to table two.) Thus, most ground plane antennas have three db loss when compared to a reference dipole in free space.

(Continued on page 34)



# THE WORLD OF

# DX

by Kenneth R. Boord

## ATTENTION ALL NORTH AMERICAN SWLs—

Steve Bohac, New Jersey, calls attention to the fact that "a letter from Edward J. Roth, Director-General, **R. Eireann**, reads in part: 'At the present time there are no plans for regularly scheduled broadcasts on shortwave . . . into the Northeast Section of the U.S.A. It is largely a question of the lack of interest in shortwave radio in the U.S. not justifying the tremendous expenditure necessary for this type of service.'"

**DXing HORIZONS** is certain there are many "old-timers" who recall the fine broadcasts "from the old sod" over 17,840 and 9,540 years ago—as well as other SWLs—who would like to hear **R. Eireann** back on the air via the shortwave bands. If YOU would like to let **R. Eireann** know there ARE MANY NORTH AMERICAN SWLs WHO ARE INTERESTED IN LISTENING TO BROADCASTS FROM **R. Eireann**, you may wish to drop a line to the **Director-General, Radio Eireann, Gen. Post Office, Dublin, Eire.**

Now this month's reports (GMT):

**ALGERIA**—R. Algerie, 11.835, noted 1000, 1100 w-N-Fr., 1200 w-N-Fr. RELAYED frm RTF, Paris (Pearce, England) Hrd in Fr. 1900-1930. (Rowell, Minn.)

**ANGOLA**—CR6RY, 4.838, hrd to 2200 s-off. (Roth, Schwartz, Conn.) CR6RZ, Luanda, MOVED frm 17.795 to NEW 17.705, noted 2130 w-mx in Pt.; N-Pt. 2215-2230, then s-off w—"A. Pt." Gud sig in Conn. (Berg) And in Minn. (Rowell) Fair then in Mo. (Buchanan) R. Clube de Benguela, 9.502, hrd s-off 2130 w—"A. Pt." (Schwartz, Conn.) R. Diamang varied w-attractive glossy photo cd w-veri message on reverse; also sent brief note to say IRC is NOT necessary. (Berg, Conn.)

**AUSTRALIA**—VLR9, 9.680, Melbourne, gud sig 0700-0800 in Calif. (Santos) Frm May 7, R. Australia's ENG. prgm for So., SE, and SW Asia, 0958-1730, is on VLE9, 9.565 (NEW fq); Japanese 0955-1000, ENG. 1100-1400 is now on VLD9, 9.580, INSTEAD of 9.570. NEW Program Guide (April-Oct.) is available FREE ON REQUEST to R. Australia, Melbourne, Australia. (KBLP)

**AUSTRIA**—NEW sked of Vienna includes 6.155, 0500-0800, 1400-1600, 1800-2100; 7.155, 0800-1000, 1200-1400; 7.200, 1000-1200; 9.770, 1600-1800. (Newhart, AMSWLC, N.J.; others) Hrd well on 6.155 despite QRN-QRM 0500-0600; ID in ENG., Fr., Ger.; wants rpts to

R. Austria, Box 700, Vienna 70, Austria; varies w-nice QSL cd. (Santos, Calif.) Observed on 6.155 w-N-Ger. 0600, 0700; MORE RECENTLY ANNCD sked for 7.200 as 1000-1200; 7.245, 0800-1000, 1200-1400, and seems to have DROPPED 7.155. (Pearce, England)

**BARBADOS**—Barbados Rediffusion, Bridgetown, acknowledged rcptn of 7.547 xmsn w-printed form ltr; said prgms are xmtd ONLY during special events such as horse racing, cricket tournaments, etc., on ZNX20, 5.040; ZNX32, 7.547, OR ZNX49, 11.015; ZNX32, 7.547, is the fq used RECENTLY; power is approx 5 kw. (Bohac, N.J.)

**CAPE VERDE IS.**—CR4AA, 3.954M, noted gud when c-d 2230. (Uthoff, Germany, via RADX)

**CHILE**—R. Corporacion, 15.150, hrd 2330-0130 w-L. Am. mx; local nx 0000, world nx 0100 in Sp. (Newhart, AMSWLC, N.J.) CE1174, 11.740, hrd 0000-0400 in Sp. (Rowell, Minn.) R. Presidente Balmaceda, CE960, 9.600, noted 0100-0134 w-pop Am. mx, nx, commercials in Sp.; man and woman anncrs; SINPO 45445. (Bennett, B.C., Canada)

**CHINA**—R. Peking, 7.480M, tuned 2132 w-N-E and much abt Af., ending 2145, then mx and propaganda talks, hrd to close 2227. (Ferguson, N.C.) Noted on 15.095 w-ENG. 1830 tune-in to 1900 c-d. (Pearce, England) R. Peking, 9.650, hrd 2245 in Chinese. (Rowell, Minn.)

**CONGO (REP. OF)**—Leopoldville, 11.755, again changed N-E to 0145 (formerly 0045); also w-ENG. commentary 0130A. (Balbi, Calif.; Berg, Conn., others) Accdg to an ANNCMT, has been using the "old" Leopoldville 50-kw. xmtr that operated so many years as OTC, but a NEW 100-kw. xmtr will come into operation SOON, when the N. Am. xmsn will be EXTENDED; however, stated the Eur. xmsns was being radiated w-10 kw.; QRA is Box 7699, Leopoldville. (Berg, Conn.) Has N-E for Eur. 2145 on 11.755; N-It. 2245, N-Sp. 2315. (Pearce, England)

**CONGO REP.**—Brazzaville, 9.730, hrd w-N-E 0515-0530. (Santos, Calif.) Noted on 15.190 w-ENG. 1900-20002 c-d; said next ENG. 0115 on 11.725; hrd on latter w-ENG. 1700-1730 ("Africa Day by Day"). (Pearce, England)

**COOK IS.**—ZK1ZA, Rarotonga, now uses 9.695 for "morning" vmsn 1900-1930; will also use this

**NEW fq for school b-c; plans to REPLACE 5.050 w-a MW channel. (Cushen, N.Z.)**

CUBA—Havana, 11.760AV, hrd dly in Sp. arnd 0230-0330; strg. (Balbi, Calif.) Asks for rpts to Box 7026, Havana, Cuba; hrd in N.J. arnd 2200-2230. (Ford) IDs in Sp. as "The Cuban Experimental Shortwave Station." Roth, Conn., others) Fq varies a great deal. (Rowell, Minn., others) Is rptd to be 100 kw. (KBLP) Havana, 6.035, hrd in Sp. 0500 check. Stn on 17.775 at 0230 in Sp. gave ID that sounds like "La Fonoteca Nacional de Cuba." (Rowell, Minn.) A RELAY of CMKC, Santiago, is on the air 1100-0500 on 6.345. (Legge, Va., via WRHB)

**DOMINICAN REP.—H15C, 4.860, La Voz del Progreso, 250 w, hrd arnd 2230 w-CWQRM. (Futch, Ga.)**

EGYPT (UAR)—R. Cairo, 11.915A, hrd 2200-2230 w-ENG., strg sig, slight QRN. (Santos, Calif.) Noted w-N-E 2145. (Saylor, Va.) ENG. starts 2130; noted w-ENG. on 17.915 at 1330-1400. (Pearce, England) Hrd in ENG. 2130, Fr. 2215 to W. Af. on 17.690; noted in Swahili on 17.892 at 1700-1740, gud sig. (Rowell, Minn.) Cairo's 25-m.b. outlet for Eur. 1900-2230 is 11.917.5M. (Uthoff, Germany, via RADX)

**NEIRE (IRELAND)—The Irish Army is to have its own SW stn at the Curragh (Cokildare) for xmsns in ENG. to Irish troops in the Rep. of the Congo. (SCDXERS)**

ETHIOPA—Accdg to a ltr frm the Lutheran World Federation, Box 654, Addis Ababa, it expects to be on the air Sept. 1 w-a 1-kw. EXPERIMENTAL xmtr for propagation checks and so on. Will initially be on the air MON., WED., FRI. 1500-2100; fqs will be ANNCD LATER. The TWO 100-kw. xmtrs are presently sked to go on the air in Nov. 1962. (WRHB) Stn is being erected 29 km outside Addis Ababa and is being designed to cover all Af., the N. East, S. Asia. The Ethiopian Gov't has placed 300 acres at the disposal of the LWF. Torsten Mansson, a Swedish missionary, has been appointed administration director. (SCDXERS)

**FINLAND—Helsinki's N. Am. xmsn REMAIN-DE at 1130-1400 in April, but B YNOW should have made "scheduled" change to 2030-2300; fqs are 15.190, 17.800. (Legge, Va.) At times, also MAY use 11.960. (KBLP) Noted on 15.190 at 1715-1830 in Finnish. (Rowell, Minn.)**

FRANCE—RTF, 6.145, noted at "powerhouse" level 2000 w-ENG. (Schwartz, Roth, Conn.; Scheiner, N.J., others)

**GABON—R. Gabon, 7.270, Libreville, noted w-N-Fr. 0530. (Cushen, N.Z.)**

GERMANY (EAST)—Berlin, 9.730, noted 0627-0640 in Ger. (Bromley, Ont., Canada)

**GHANA—R. Ghana, Accra, hrd TESTING on 7.295 w-N-E arnd 2215-2222 when ID for ONLY 4.915, 3.366 outlets and s-off after Anth. (Roth, Berg, Conn.) Hrd on 7.295 w-N-E 0600-0615; QRN and ham QRM in Calif. (Santos) Vy strg 2100 in ENG., much better in N.J. than on 11.798A or 4.915 outlets. (Bohac) Noted on 3.366 in ENG. 0610. (Scheiner, N.J.) QSL cd frm stn lists ONLY 3.366, 4.915, 9.525, 9.640 channels. (Craighead, Kansas) Accra, 11.798AV, noted 2000 w-N-E, 2010 N-Fr.; hrd opening on 9.640 at 0700 w-N-E, hrd until 0800. (Pearce, England) Noted on 4.915**

**at 2230-2300 in ENG., mostly mx; closed 2300 (SAT.) (Rowell, Minn.) Stn hrd w-fair sig on 21.680 at 1700-1900 s-off in Fr., native, Wn. mx may be Accra. (Balbi, Calif.)**

**GUATEMALA — TGQA, 6.110, R. Nacional, Quezaltenango, hrd w-ENG. greetings by YL and bilingual (ENG-Sp.) talk 0255-0300. (Newhart, AMSWLC, N.J.) TGQB, R. Nacional, 11.700, noted 1830 in Sp., mx. (Rowell, Minn.) Observed in B. C. 0245-0300 w-talks in Sp., native mx; QRM frm R. Moscow; SINPO 44444. (Bennett, Canada) TGNB, 9.668, noted w-religious prgm in ENG. 0330. (Combs, MISSOURI SW CLUB)**

**GUIANA (BRT.)—R. Demerara, 5.981, Georgetown, noted 0945. (Drummond, MISSOURI SW CLUB)**

**GUIANA (FR.)—R. Cayenne veried by ltr for rcptn when hrd 1000 on 6.170, 1 kw.; makes 182nd country veried. (Cushen, N.Z.)**

**HOLLAND—R. Nederland hrd to Af. w-all-Dutch session on 17.810, 15.425, gud sigs, 1930-2020A. (Balbi, Calif.) Excellent level noted on 15.445 arnd 2145-2200. (Ford, N.J.)**

**HONDURAS—La Voz del Atlantico, 4.950, hrd 0200 w-pop mx. (AMSWLC) HRQN, La Voz del Atlantico, hrd regularly w-beautiful sig, although listed only 500 w. Fast verie gives sked 1255-1800, 2155-0400 on 4.905 AND 4.880. (Futch, Ga.) A NEW one hrd is R. Continental, 4.770 (ANNCD), San Pedro Sula, arnd 0100. (Futch, Ga.) Also noted in Mo.; call "sounds" like HRNC (?); noted 0502-0603. (Buchanan)**

**ICELAND — Reykjavik may have EXTENDED its sked recently; noted over TFJ, 11.780A, w-piano and classical mx, annmmts in Icelandic 2115-2200. (Rowell, Minn.) Rptd hrd recently frm arnd 1900. (SCDXERS)**

**INDIA—AIR, 15.105, Delhi, strg W-N-E 1545-1555, then in Swahili. (Balbi, Calif.) Noted w-ENG. to SE Asia 1330-1430, 21.560, 17.705. Office of the Station Director, AIR, Hyderabad, sent ltr-verie and QSL cd for 4.988, hrd in Dec. 1530-1600 (AIR N-E 1530); says NOW on 4.990. (Pearce, England) AIR, 15.105, Delhi, noted 1600-1630 w-native mx, ENG. annmmts; still going in native 1705. (Rowell, Minn.) VUM, 4.920, Madras, noted 1530 w-N-E. (Jensen, DSWC) Bhopal, 4.820, has been hrd 1535 w-Indian prgm. ("Monitor," ISWL) AIR, 11.890, noted w-gud sig 0105-0115 when anncd in ENG. for Sp. prgm to S. Am. (Bromley, Ont., Canada)**

**INDONESIA — Djakarta, 11.710, noted 1700 Fr., 1800 Indonesian, 1900-1958 c-d ENG., parallel 9.585. (Pearce, England) Observed w-ENG. 1430-1500 on 9.585, 11.795. (Rowell, Minn.)**

**IRAN—R. Teheran, 7.035A, noted w-Fr. 2030, N-E 2045; closed 2056. Asks for rpts to External Services of Radio Iran, Teheran, Iran. (Pearce, England)**

**IRAQ—R. Baghdad, 6.030, noted w-N-E 2030, vy bad QRM. (Pearce, England)**

**ISRAEL—Tel Aviv, 9.009, hrd 1515-1545 in Yiddish. (Santos, Calif.) Noted on 9.009 at 0400-0430 s-off in lang; observed on 11.918A at 2340-2400 but w-QRM. (Rowell, Minn.)**

**ITALY—Rome, 21.560, noted w-ENG. 1535-1555; ENG. for WCNA hrd at excellent level on 9.575 at 0305-0325. (Santos, Calif.) Postal QRA is AACD as Box 320, Rome, Italy. (Ford, N.J.)**

**RAI, 17.740, noted 1415 w-N-ltr. at slow-speed to Argentina.** (Rowell, Minn.) **RAI, 9.515, Sicily, hrd 0550 w-ltr. Lesson.** (Roth, Conn.)

**IVORY COAST**—R. Abidjan, 11.820, noted 0630 w-N-Fr., then rcdgs; still on air 0800 w-rcdgs; also observed 1830 w-N-Fr., 1845 N-E; ANNCES 4.940 as parallel, and says the 11.820 channel is for W. Af., especially Ghana, Liberia; ENG. ends 1915, when continues in Fr.; s-off 2330. (Pearce, England) The 11.820 outlet is hrd in Minn. arnd 1830-2330. (Rowell) This NEW 100-kw. outlet is sked 0630-0800, 1745-2330. (Legge, Va., via WRHB) Abidjan, 7.215, gud SUN. ONLY 0730 w-N-Fr. (Balbi, Calif.)

**JAPAN**—The 15.135 Tokyo fq in the 0030-0130 ECNA xmsn of R. Japan continues to be completely covered by Brazilian stn on same channel; 17.725 also has Brazilian QRM; 21.520 is in the CLEAR, but usually is weak. (Legge, Va.) Accdg to ANNCMTS, now has 15-min. Listeners' Corner every WED. 0100, DX Corner every other wk. Xmsn 0300-0500 (NEW TIME) combines L. Am. and WCNA beams on 21.520, 17.725, 15.135, 11.800; ENG. begins 0415-0500 s-off; Listeners' Corner or DX Corner every SAT. 0445-0500; xmsn to Hawaii 0530-0700 is now on 17.725, 15.235. (Balbi, Calif.) R. Japan, 11.800, noted at gud level 1815-1830 in ENG. (Niblack, Ind.) Hrd on 9.505, 11.815, 15.235 at 1500-1520 in ENG., then Japanese to 1600; 11.815 BEST in Minn. (Rowell) JOZ, 3.925, fair 1120-1148 w-American pop mx to 1130, then N-Japanese; some ham QRM. (Buchanan, Mo.) JOZ2, 6.055, noted 0855-0905 w-news, talks in Japanese, native mx; SINPO 44344 in B.C. (Bennett, Canada)

**JORDAN**—After INITIAL TESTS to N. Am. Eur. on 9.530, Amman is now hrd well in Ar. 0130-0315 on 7.155. (Balbi, Calif.; Niblack, Ind.; Legge, Va., others) At times also has ENG.; severe CWQRM. (Sisler, W. Va.; Craighead, Kansas, others) Asks for rpts to Box 909, Amman, Jordan. (KBLP) Amman, 9.530, observed dly 0645-0805 c-d in Ar., some Wn. mx. (Pearce, England) Hrd on 11.810 at 1955-2200 in Ar., mx. Amman noted on 7.155 at 0330-0615 in regular Ar. prgmg; also noted 0120 and may have opened 0115. (Rowell, Minn.)

**KATANGA**—Verie-ltr was rcd by surface mail only 21 days after rpt was sent; ltr was in ENG., stated would soon have PRINTED QSL CD. (Craighead, Kansas) R. Katanga, 11.866, noted w-ENG. 2015; c-d 2100. (Pearce, England) Hrd 0415-0600 in Fr., native mx, BEST 0430. (Rowell, Minn.)

**KENYA**—Nairobi, 4.934, logged 0402 w-N-E. (Schwartz, Conn.)

**KOREA (SO.)**—HLK41, 15.125, Seoul, hrd well in ENG. 0730-0800. (Cushen, N.Z.) Seoul, 15.410, 11.925, noted in ENG. 1430-1500. (Rowell, Minn.)

**KUWAIT**—KBS, 4.967.5, is sked dly 0230-0700, 0857-2110. (SCDXERS)

**LAOS**—R. Vientiane veried via airmail in 3 wks; gives sked on 6.150, 1 kw., as 2330-0100, 0500-0630, 1100-1345; N-E 1300, Vietnamese 1315, Chinese 1330. (Cushen, N.Z.)

**LIBERIA**—ELWA, Monrovia, has a NEW fq assignment of 3.225, accdg to the stn. (Balbi,

Calif.) Noted on 15.155, apparently MOVED frm 15.085, hrd 2130 w-religious prgm. (Niblack, Ind.) Noted s-off 2130 in ENG. (Rowell, Minn.) ELBC, R. Liberia, 3.255, Monrovia, hrd 0740-0805 in ENG. (Craighead, Kansas) ELBC sent a regular form veri-ltr. (Berg, Conn.)

**MALI REP.**—R. Mali, 7.145, s-on 0630, hrd to 0830 strg; N-Fr. 0700; ID as "Radiodiffusion de Mali." (Balbi, Calif.) R. Bamako, 4.835, hrd 0637 w-native chants; poor w-bad QRM. (Buchanan, Mo.)

**MEXICO**—NEW stn is XERROC, 15.110, ' kw., directed towards Eur. 1600-2400; QRA is Zem-poola 77, Mexico, 12, D.F. (Wingartz, Mexico City, via WRHB) QRA for XECMT, R. Mante, is P. O. Box 79, Ciudad Mante, Tamps., Mexico. (SCDXERS) Fq of this one is 6.090. (KBLP)

**MONTE CARLO**—TWR, 9.690, hrd at NEW TIME 0630-0700 to Britain due to British Summer Time; SUN. audible to 0830; ANNCES next ENG. xmsn for 1850 on 9.705. (Balbi, Calif.) ENG. religious prgm noted in progress when tuned 1900 on 9.705. (Pearce, England) Observed in N.J. on 9.705 at 0700 (now may be 9.690—Ed.) in ENG. when c-d. (Scheiner) TWR veried w-attractive folding-type QSL-cd, thanks for IRC enclosed wrpt. (Berg, Conn.) R. Monte Carlo hrd on BOTH 6.035, 6.135 opening 0500 to PAST 0630, still going; has Ger., Fr. instru mx; excellent level on both channels in N.J. (Bohac) Noted on latter outlet in Fr. 0645. (Scheiner, N.J.)

**MOROCCO**—R. Rabat, 11.735, hrd w-strg sig in ENG. 1800; asks for rpts to Moroccan Broadcasting System, African Service, Rabat, Morocco. (Cushen, N.Z.) Is parallel on 9.505. (Pearce, England) Latter hrd in Minn. 1900-2000; both 11.735, 9.505 outlets observed 2200-12300 in Ar. (Rowell) Rabat, 7.115, hrd 0820-0915 w-Wn. pop mx, nx and annncmts in Ar.; QRM frm high-speed CW; man, woman anncrs; SINPO 34433. (Bennett, B.C., Canada)

**MOZAMBIQUE** — CR7BG, 15.147, LISTED 15.152, hrd 1530-1800 in Pt., mx; BEST 1715-1745. (Rowell, Minn.)

**NEW CALEDONIA**—R. Noumea, 6.035A, hrd frm 0658; first half-hr often is Melanesian lang and mx; ENG. xmsns to N.Z., Australia may be started soon. (SCDXERS)

**NEW GUINEA (AUSTRALIAN)**—VLT9, 9.520, Pt. Moresby, noted 0612 fair to gud w-annncmts in ENG. and native by YL. (Buchanan, Mo.)

**NEW GUINEA (DUTCH)** — RONG, 6.070A, Biak, is noted on SAT. as late as 1315 s-off; on SAT. features mx prgm in ENG., Dutch, Indonesian called "Island International Club" 1240-1310A. (Tabuchi, JSWC) Hrd in Calif. 1315-1330 c-d, mx, nx prgm in Dutch; IDs in ENG. at c-d; gud level. (Santos)

**NIGER**—R. Niger, 4.785, gud when tuned in Fr. 0615. (Saylor, Va.)

**NIGERIA**—Ibadan, 7.285, hrd 0500-0620 in ENG.; extreme QRM frm UNID Fr.-spkr which apparently s-on 0515 and s-off 0545. Wn. Nigerian Radiovision Serv., Ibadan, 6.185, hrd 0500-0720. (Craighead, Kansas) Latter noted in Conn. 2230 w-U.S. pop mx, ENG.; hard to copy due to Brazilian QRM. (Berg) Comm. Serv., 4.990, Lagos, hrd 0530-0600, then w-BBC nx relay. (Pearce, England) Unugu, 4.855, noted 2230-

2300 in ENG., mx, commercials. (Rowell, Minn.)

**PAKISTAN—R. Pakistan, 15.145, Karachi, excellent sig 1530 w-N-E at dictation speed, 1545 parallel 11.674A.** Hrd on 11.725, may be Dacca, w-N-E 1445-1530 parallel 11.674A and 6.225, both in Karachi, **BEST** on 11.674A. (Balbi, Calif.) The 11.674A channel noted in ENG. for Turkey 1830 tune-in. (Scheiner, N.J.) Karachi, 21.590, noted w-N-E 0800. (Pearce, England) Lahore, 4.807, observed 1655-1700 c-d. ("Monitor," ISWL)

**PHILIPPINES—FEBC's DZ19, 7.240** (rptd and ANNCD as 7.250) noted strg, w-ID 1630, 1700; s-off 1705 after full ID and list of ALL FEBC fqs, Anth.; N-E hrd 2145 on DZH9, 15.300; at 2330 on 17.805 ONLY since DZF3, 15.390, is NOT AUDIBLE then due to WRUL; 0800 on 11.855, 9.730; 0930 on 11.855 ONLY, 1430 on 9.730, and 1545 on DZF2, 11.920. (Balbi, Calif.) Hrd w-ENG. ID on 11.920 at 2300. (Scheiner, N.J.) And 1200. (KBLP) "Voice of the State University" now uses 7.160 INSTEAD of 7.240. (Tabuchi, Japan, via WRHB)

**PORTUGAL—EN, Lisbon, hrd on 6.025, 9.635, 9.740 at 0200-0400; all-Pt.; gud level in Calif. (Santos) Hrd on 6.025 at 2045 w-mx, call, talk in Pt. 2100. (Pearce, England) Noted on 15.380 at 1600-2000; in clear now that WRUL is on 15.390. (Balbi, Calif.) CSA66, 17.895, tuned 1720 w-mx, followed by N-E 1733-1744; 1746 ID, gave fq, mx followed to end of ENG. 1755. (Ferguson, N.C.) Hrd on 11.840 at 2130-0030, vy gud level in Minn. (Rowell) Noted on 21.495 at 1552 w-fair level beaming Pt. talk to Goa. (Buchanan, Mo.)**

**PT. INDIA (GOA)—Emissora de Goa, 21.580, hrd w-fair strg 1630-1830 w-prgms in Indian lang., Pt. (Legge, Va.) Sked crd recently lists 6.085 at 0130-0900, 1100-1830; TEST xmsn 1630-1830, 21.580. (Santos, Calif.) Tuned on 21.580M at 1755 w-mx, 1800 ID in Pt., followed by talk in lang. 1815 ID followed by pop rcddgs, some in ENG., to 1829 ID and c-d. RTF, Paris, has this fq COVERED usually to 1745. (Ferguson, N.C.)**

**RUANDI-URUNDI—R. Usumbura uses 6.195 w-10 kw., and is hrd **BEST 0430-0530**; also operates 1000-1130 (SUN. frm 0700), 1700-2030; QRA is Box 1400, Usumbura. (Cushen, N.Z.)**

**SARAWAK—R. Sarawak, 4.950, Kuching, hrd w-ENG. 1330-1400, excellent sig. (Santos, Calif.) Also noted in Kansas. (Craighead) R. Sarawak has REPLACED 9.565 w-7.160 at 0400-0530. (RADX)**

**SAUDI ARABIA — Mecca-Djeddah, 11.950, noted in Ar. 0430. (Roth, Conn.) Hrd in Minn. 0445-0500 in Ar.; weaker now. (Rowell) Hrd on 6.170 in Ar. 1630. (DSWC)**

**SENEGAL—Dakar, 11.895, tuned 2040 w-N-E; 2055 ID and cont'd w-N-Pt.; 2100 ID and cont'd in Fr., still in Fr. 2245 tune-out. (Ferguson, N.C.) Hrd in Minn. 2000-2330. (Rowell)**

**SIERRA LEONE—Freetown, 3.316, hrd w-nx in lang 0640; local nx in ENG. 0655, BBC nx 0700. (AMSWLC) Noted s-on 0640. (Futch, Ga.) Good in N.J. 0645. (Scheiner)**

**SINGAPORE—R. Singapore, 4.820, hrd in ENG. xmsn (Test No. 4) 1300-1430 s-off; asked for rpt to Box 1902, Singapore; strg sig in Calif. (Balbi)**

Accdg to ANNCMT, now should be on a sked of 2230-1630; noted well w-ENG. 1230 on 4.820. (Cushen, N.Z.) Observed on 4.820 w-pop mx, all-ENG. 1400-1415. (Santos, Calif.) Other fqs are rptd as 7.250, 6.015, 6.175. (KBLP) BBCFES, 11.955, noted 1500-1630 w-relays of BBC, London. (Rowell, Minn.) Noted fair level on 9.690 at 1510 recently. (KBLP) R. Malaya, 7.200, poor but readable 1150-1218 w-varietiy and operatic mx; ID by woman 1200. (Buchanan, Mo.)

**SOLOMON IS. — VQO2, 5.960, Honiara, hrd 0901 w-prgm preview in ENG.; het-QRM but fair sig. (Buchanan, Mo.)**

**SOMALILAND (FR.)—R. Djibouti, 4.780, hrd 1915-2000 s-off w-L. M." All-Ar. except Fr. ID before c-d. (AMSWLC)**

**SUDAN—R. Omdurman, 11.855, noted s-on 0415 in Ar., FB level in Ind. (Niblack) Hrd in Minn. to 0530. (Rowell) Fades rapidly in Mo. AFTER 0440. (Buchanan)**

**SURINAM — Paramaribo now operates on 15.565, REPLACING 15.405, at 0930-1230, 2030-0330. (Legge, Va., via WRHB)**

**SWITZERLAND—NEW fqs listed by Berne in SUMMER sked effective May 7 are HEU3, 9.665, 1645-1830, to M. East; HE15, 11.715, 0545-0645, 1700-2245 to Af.; HE18, 17.795, 1445-1630 to S. Asia. (Legge, Va.) Some wks ago, International Red Cross, Geneva, was hrd TESTING 0558 to PAST 0635 on 7.210 in ENG., Fr., Ger. (Craighead, Kansas; Roth, Conn.) Also hrd in N.Z. at strg level. (Cushen)**

**SYRIA—R. Damascus, 15.165, noted 2000 w-ENG. commentary, Ar. mx 2015-2030 c-d. (Pearce, England) Tuned frm 1930, N-E 2005. (Rowell, Minn.)**

**TAHITI—R. Tahiti, 6.135, Papeete, hrd "nearly" at excellent level w-Fr. and Tahitian 0400-0630. (Santos, Calif.) Noted in Minn. 0430 in Fr. (Rowell)**

**TAIWAN (FORMOSA) — Taipeh's ENG. xmsn 1005-1050 strg on 15.225, 6.095; ANNCS 17.890 and 11.920 as parallel but these are INAUDIBLE in Calif. (Balbi) BED58, 17.785, noted opening 0130 w-vy gud sig; closes 0200. (Ferguson, N.C.; Rowell, Minn.; Scheiner, N.J.)**

**TCHAD (REP.)—Fort Lamy, 4.904, noted 0630; often has hvy CWQRM. ("Monitor," ISWL)**

**TOGO—R. Lome, 5.047, noted in Fr. 2245-2300 s-off (SAT.) (Rowell, Minn.) Hrd on this channel 2256 on SAT. w-dance mx. (Buchanan, Mo.)**

**TUNIS — Sked of R. Tunis includes F. Serv. Prgm (National), 11.970, 0500-0800, 1600-1800; 17.720, 0800-1400; 5.985, 1900-2400; Prgm Special, 11.970, 1800-1900. (Pearce, England) Observed on 11.970 at 1700-1900 in Ar., talks, mx. (Rowell, Minn.) Noted 1753 w-ID for "Huna Tunis," then Ar. chants. (Buchanan, Mo.)**

**UNION OF S. AF.—SABC, 25.800M, tuned 1410 w-ENG. talks, mx; hrd to 1500 when anncd "Calling to You" session. (Ferguson, N.C.) SABC is hrd in Minn. arnd 0430-0530 on 4.810, 4.895, 4.945; recently noted on 21.490A at 1500-1800. (Rowell)**

**UNITED SOMALI REP. — Hargeisa, 9.667A, noted 1330 s-on in Somali; faded arnd 1400. (Schwartz, Conn.) Veried rpt via airmail in 16 dys**

for 9.667, hrd 1335-1455; sent photographic QSL cd of stn, signed by P. W. Green, Broadcasting Engineer. (Bohac, N.J.)

UPPER VOLTA (REP.)—Accdg to QSL cd, R. Haute-Volta, Ouagadougou, is now sked MON., TUE., WED., FRI. 0615-0700, 1215-1330, 1800-2200; THURS., SAT to 2300; SUN. 0930-2300, all on 4.815 and a NEW fq of 7.230. Presumably, 9.515 has been DROPPED. (Roth, Conn.) The NEW 7.230 outlet is the NEW 25-kw. RELAY xmtr at Bobo-Dioulasso; 4.815 at Ouagadougou is 4 kw. (Berg, Conn.)

USA—WRUL, New York City, was noted recently TESTING on 9.695 at 1528-1538, ID and s-off. (Rowell, Minn.)

USSR — R. Tashkent, 11.695A, hrd w-ENG. 1400-1430 s-off; wants rpts of Radio Tashkent, Uzbek S.S.R., USSR. (Santos, Calif.; Rowell, Minn.) Alma Ata, 10.530, hrd 0132 to PAST 0215; short ID 0201 by woman ends with words, "Alma Ata." (Craighead, Kansas) The Pacific Serv. in ENG. frm R. Moscow is aired 1730-2030 (SUN. ONLY) on 9.540, 9.610, 9.700, 9.730, 11.700, 11.850; 0300-0730 (DLY) on 9.540, 9.730, 11.700, 11.850. (Wingartz, Mexico City, via WRHB) Location of some SW stns that RELAY the Moscow H. or F. Serv. are 17.760, Lvov; 17.775, 17.875, Ulan Ude; 17.785, Frunze; 17.795, Tbilisi; 17.815, Simferopol; 17.825, Kursk; 17.850, Tiraspol; 17.870, Rjasan; 17.880, Petropavlovsk, and 17.895, Kaunas. (W. Uthoff, Germany, via WRHB) R. Moscow noted to N. Am. in ENG. 2300-0100 on 11.880, 9.760, 9.720, 9.680, 9.605, 9.760, 11.690 are hrd to 0530. (Rowell, Minn.)

VIETNAM (NO.)—R. Hanoi, 9.840, has ENG. xmsns 1000-1030, 1330-1400, including nx; NOT AUDIBLE on 11.840 due to QRM by Moscow H. Serv.; Hanoi has Fr. xmsns 1030-1100. (Balbi, Calif.) ENG. is sked on 9.840, 11.840 at 0200-0245, 0830-0930, 1330-1400, 1530-1545. (Jida, Japan, via SCDXERS) R. Hanoi hrd on 4.732 at 2210 w-mx, ID. (DSWC)

WINDWARD IS.—WIBS noted 2040 recently on 15.390 w-pop mx. (Niblack, Ind.)

YUGOSLAVIA — R. Belgrade, 6.100, 7.200, noted w-ENG. 1830-1900; has "vacated" 9.505. (Pearce, England)

LAST MINUTE FLASHES!—CONGO (REP. OF) Once recently, Leopoldville used 11.795 instead of (ANNCD) 11.755 to N. Am. 0000-0230, N-E 0145; next day was BACK on 11.755. (Balbi, Calif.)

CUBA—Havana, 11.760AV, noted 0300-0400 w-nx, commentaries in ENG., Cuban mx; wants rpts to Box 7026, Havana, Cuba. (Santos, Calif.) Anncs "You are listening to Cuba's experimental shortwave station transmitting on a frequency of 11,770 kilocycles, 25 meter band, from Havana, Cuba." N-E 0330; uses music-box chimes type IS. (Bohac, N.J.; Auerhahn, N.Y.; Rowell, Minn.; Howard, Mo., others) Hrd parallel over 11.760AV and NEW 21.630, BOTH strg level, 1710-2000 s-off; also 0100 s-on to 0327 s-off, all-Sp.; another day hrd s-on 2115. Still later date was in ENG. 0300 on 11.770A, but was UNREADABLE due to JAMMING; 21.630 was too weak to read then; also hrd s-on 1805 or 21.630, 11.770A INSTEAD of usual 11.760A in Sp. ONLY, and ran to 2230; ANNCD 11.770 to the Americas, 21.630 for Eur. (Balbi, Calif.) Also noted on 21.630 by Rowell, Minn., at 2200 parallel 11.770A (latter MOVED there at 2200 from 11.762A); 21.630, 11.762A fqs were also noted by Rowell 1545 in Sp.; ENG. noted 0125 (by woman) on 11.770A.

NIGERIA—Power of Nigerian SW stns will be INCREASED soon, and a F. Serv. is being planned. (SCDXERS)

SORAFOM NEWS — Frm SORAFOM, Paris, comes word that NEW 25-kw xmtrs are to be installed during 1961 at R. Niger, R. Dahomey, R. Togo, R. Cameroun (Yaounde), R. Bangui, R. Gabon, and R. Tchad. (Berg, Conn.)

SWAN IS.—R. Swan, 6.000, checked 0020-0400 but LATELY SEEMS JAMMED! (Rowell, Minn.)

UNION OF S. AF.—SABC hrd on 11.765 at 0430 in ENG., gave time, commercials, mx; strg 0430 but faded out 0500. (Rowell, Minn.)

USA—WRUL noted on NEW 9.695 outlet, parallel 11.855, 15.380, 17.750, 17.845 at 0100-0300 in Sp. to L. Am. (Rowell, Minn.) The AMSWLC rpts WKYN, Rio Piedras, Puerto Rico, hrd on 26.300, RELAYING a MW outlet 2104-2210.

**DEADLINE**—Due to space limitations, please send ONLY your TOP-NOTCH items to reach me by MAY 17 for the JULY issue. Thanks for your FB cooperation! QRA is Ken Boord, 948 Stewartstown Rd., Morgantown, West Virginia, U.S.A. See YOU next month? . . . KEN BOORD

## new! 7-Band SWL/DX Dipole Kit for 11·13·16·19·25·31·49 meters

Here's a low cost 7-band receiving dipole antenna kit that will pick up those hard-to-get DX stations. Everything included . . . just attach the wires and you're on the air! Weatherproof traps enclosed in Poly-Chem for stable all-weather performance. Overall length of antenna - 40 feet.

Complete with

- 8 Trap Assemblies
- Transmission Line Connector
- Insulators
- 45 ft. No. 16 Tinned Copper Wire
- 100 ft. of 75 ohm twin lead

**SWL-7 \$14.75**

WRITE FOR NAME OF NEAREST DISTRIBUTOR

**Mosley Electronics, Inc.** 4610 N. Lindbergh • Bridgeton, Missouri

# LIST OF SHORTWAVE ABBREVIATIONS AND SYMBOLS FOR USE IN REPORTING TO DXing HORIZONS

Compiled by Ken Boord, Shortwave Editor  
(Revised MAY 1961)

## — A —

A—approximate(ly). ABC—Australian Broadcasting Commission, Melbourne, Australia (and other cities in Australia). ABS—Aden Broadcasting Service, Aden; OR Afghan Broadcasting System, Kabul, Afghanistan. abt—about. accdg—according. Af.—Africa(n) (type of music—or language). AFN—American Forces Network. AFRTS—Armed Forces Radio and Television Service, USA (and relay points). Af. Serv.—African Service. AIR—All India Radio, New Delhi, India. AIR-U—Asociacion Interamericana de Radiodifusion, Montevideo, Uruguay. Alta.—Alberta, Canada. AM—amplitude modulation. AMSWLC—American SWL Club, Cranford, New Jersey, USA. anncd—announced. annce—announce. anncmnt—announcement. anncr—announcer. approx—approximate(ly). "A. Pt."—"A Portuguesa" (Portuguese National Anthem). Ar.—Arabic (type of music—or language). arnd—around. Ar. Serv.—Arabic Service. As.—Asian. As. Serv.—Asian Service.

## — B —

BBC—British Broadcasting Corporation, London, England. BBCFES—BBC Far Eastern Station, Singapore, Singapore. BBS—Burma Broadcasting Service, Rangoon, Burma; OR Bulgarian Broadcasting Service, Sofia, Bulgaria. B-C or b-c—broadcast; broadcasted; broadcasting. BCB—broadcast (medium-wave) band. BCC—Broadcasting Corporation of China, Taipei, Taiwan (Formosa). bdcstg—broadcast; broadcasted; broadcasting. BDXC—Brazilian DX Club, Rio de Janeiro, Brazil. BHBS—British Honduras Broadcasting Service, Belize, British Honduras. BNBS—Belgian National Broadcasting Service, Brussels, Belgium. B. P.—Boite Postale (Post Office Box). Brt. Col.—British Columbia, Canada. B. W. Af.—British West Africa(n). BWI—British West Indies.

## — C —

C. Am.—Central America. CBC—Canadian Broadcasting Corporation, Montreal, Quebec, Canada. c-d—closedown. C.F.W.I.—Caribbean Federation of the West Indies. CIA—Central Intelligence Agency, Washington 25, D.C., USA. cl—call letters. Comm. Serv.—Commercial Service. condx—condition/s. cont'd—continued. C. P. Caixa Postal (Post Office Box). cpy—copy. CQ—call to everybody/anybody. c-s—call sign/s. CW—code (Morse). CWQRM—code (Morse) interference.

## — D —

DBR—Der Bayerische Rundfunk, Munich, Germany (Federal Republic). dly—daily. Dom. Rep.—Dominican Republic. Dom. Serv.—Domestic Service. DSWC—Danish Shortwave Club. DW—Deutsche Welle, Cologne, Germany (Federal Republic). DX—long-distance reception. DXBC—DX broadcast. DXH—DXing HORIZONS magazine. DXR—DX-Radio, house organ of the Radio Club of Sweden (Sveriges Radioklubb—or SRK). dy/s—day/s.

## — E —

E.—East. E. Af.—East Africa(n) (type of music). EBU—European Broadcasting Union, Geneva, Switzerland. ECNA—East Coast of North America. ED.—editor/edited. EG—Emissora de Goa (Radio Goa), Goa (Portuguese India). EMR—East Mediterranean Relay of the British Broadcasting Corporation (BBC). E-N—English news. EN—Emissora Nacional de Radiodifusao, Lisbon, Portugal. En.—Eastern (type of music—or language). Eng.—or ENG.—English. ERP—effective radiated power. Eu.—Europe(an). Eu. Serv.—European Service. exc.—except. exp.—experimental. Ext. Serv.—External Services.

## — F —

FB—"fine business"; O.K.; all right; good. FBC—Finnish Broadcasting Company, Helsinki, Finland; OR Federal Broadcasting Corporation of Rhodesia and Nyasaland; OR Fiji Broadcasting Commission, Suva, Fiji. FBS—Forces Broadcasting Service; OR Forces Broadcasting Station. FCC—Federal Communications Commission, Washington 25, D.C., USA. FDXC—Finlands DX-Club, Helsinki, Finland. F. East—Far East(ern) (type of music—or language). FEBC—Far East Broadcasting Company, Manila, The Philippines (or elsewhere). FEN—Far East Network (AFRTS), Tokyo, Japan. FES—Fare Eastern Service. FIBS—Falkland Islands Broadcasting Service, Port Stanley, Falkland Islands; OR Foreign Broadcast Information Service, Washington 25, D.C., USA. Fl.—Flemish. FM—frequency modulation. fq/s—frequency/frequencies. Fr.—French. frm—from. F. Serv.—Foreign Service. F. W. Af.—French West Africa(n).

## — G —

GBS—Ghana Broadcasting System, Accra, Ghana. GDR—German Democratic Republic (EAST Germany). GDX-Aren—House organ of the Gothenburgs DX-Club, Gothenburg, Sweden. GDXC—Gothenburgs DX-Club, Gothenburg, Sweden. Ger.—German. GFR—German Federal Republic (WEST Germany). GMT—Greenwich Mean Time. GOS—General Overseas Service. Gr.—Greek. "GSTQ"—"God Save the Queen" (National Anthem of the British Commonwealth of Nations). gud—good.

## — H —

het—heterodyne; heterodyned; heterodyning. HJBS—Hashemite Jordan Broadcasting Service, Amman, Jordan. hr/s—hour/s. hr'd—heard. H. Serv.—Home Service.

## — I —

IBRA-(Radio)—International Broadcasting Association (religious society) with headquarters in Stockholm, Sweden. IBS—Israel Broadcasting Service, Tel Aviv or Jerusalem, Israel. ID—identifies; identified; identifying. IFRB—International Frequency Registration Board, Geneva, Switzerland. info—information. instru—instrumental music. int.—international. IRC—International Reply Coupon. irreg—irregular(ly). IS—interval signal. ISWB—international shortwave band. ISWBC—international shortwave broadcast(er/ing). ISWC—International Short Wave Club, London, England; house organ is International Short Wave (ISWR). ISWL—International Short Wave League, England; house organ is Monitor. ISWR—International Shortwave Radio; OR house organ of the International Short Wave Club, London, England. It.—Italian. ITU—International Telecommunications Union, Geneva, Switzerland.

— J —

JSWC—Japanese Short Wave Club, house organ is Shortwave DX Guide (SWDXG).

— K —

KBLP—Ken Board's SW Listening Post, Morgantown, West Virginia, USA. KBS—Korean Broadcasting System, Seoul, (South) Korea (Republic of); OR Kenya Broadcasting Service, Kenya; OR Kuwait Broadcasting Service, Kuwait. kc/s—kilocycle/s. kw—kilowatt/s.

— L —

L. Am.—Latin America(n). lang—language. LBC—Liberian Broadcasting Corporation (ELBC), Monrovia, Liberia. LBS—Lebanese Broadcasting Station, Beirut (Beyrouth), Lebanon. lingo—language; dialect; tongue. "L. M."—"La Marseillaise" (French National Anthem). L. T.—Local Time. ltr—letter. LW—long-wave.

— M —

M—measured (freq.). m.—meter/s (metre/s). m. b.—meter (metre) band. Mbg.—Mailbag. mc/s—megacycle/s; meg/s. mc/s b.—megacycle band. M. East—Middle East(ern) (type of music—or language). meg/s—megacycle/s. min—minute/s. mny—many. mnthly—monthly. MW—medium-wave (broadcast band). mx—music.

— N —

N—news. N. Af.—North Africa(n). N. Am.—North America(n). N. Anth.—National Anthem. NBC—Nigerian Broadcasting Corporation, Nigeria. NDR—Norddeutscher Rundfunk, Hamburg, Germany (Federal Republic). N. East—Near East(ern) (type of music—or language). Net.—Network. Nfld.—Newfoundland, Canada. NHK—Nippon Hoso Kyokai (Japan Broadcasting Corporation), Japan. NNRC—Newark News Radio Club, Newark, New Jersey, USA. No.—North. Noread (Radio)—Nordic Radio Evangelistic Association, Oslo, Norway. nr—near. N. S.—Nova Scotia, Canada. nsp/s—newspaper/s. nx—news. NZBS—New Zaland Broadcasting Service, Wellington, New Zealand. NZDXRA—New Zealand DX Radio Association. NZRDXL—New Zealand Radio DX League.

— O —

occ.—occasionally. OIRT—International Radio and Television Organization, Prague, Czechoslovakia. OM—"old man." Ont.—Ontario, Canada. OR—Oesterreichischer Rundfunk (Austrian Radio), Vienna, Austria. O. Serv.—Overseas Service.

— P —

Pac. Serv.—Pacific Service. pop—popular (music). PR—Polskie Radio, Warsaw, Poland. prgm/s—program/s. Prov.—Province. Pt.—Portuguese. Pt. E. Af.—Portuguese East Africa(n). Pt. India—Portuguese India (Goa). Pt. W. Af. Portuguese West Africa(n).

— Q —

QRA—address; location. QRG—wavelength (or frequency). QRK—signal quality. QRM—interference from another radio signal. QRN—atmospherics (static); also, manmade interference. Q-S—reporting code for amateur (ham) operators (phone). QSA—signal strength. QSB—fade; fades; faded; fading. QSL—verification; veri; verify; confirmation of reception. QSO—contact. QTH—location; address. Que.—Quebec, Canada.

— R —

R.—radio. RA—Radio Australia. RADX—

"Australian DXers Calling" (DX broadcast by Radio Australia, Melbourne, Australia) RAI—Radiotelevisione Italiana (Radio Italiana; Radio Roma), Rome, Italy. RBI—Radio Berlin International, German Democratic Republic (EAST Germany). crd—received. rcdg/s.—recording/s. rcr—receiver. rcptn—reception. RD—Radio Denmark, Copenhagen, Denmark; OR Radio Damascus, Syria (UAR). Rdif.—Radiodifusora. reg.—regional. rel.—relay; relayed; relaying. Rep.—Republic. RFE—Radio Free Europe, Germany or Portugal. RIAS—Radio In America Sector, Berlin, Germany (Federal Republic). R. Lux.—Radio Luxembourg, Luxembourg. RM—Radiodiffusion Marocaine, Rabat, Morocco; OR Radio Moscow, Moscow, Union of Soviet Socialist Republics. RMC—Radio Monte Carlo, Monte Carlo, Monaco. R. Nac.—Radio Nacional. R. Nat.—Radio National. RNB—Radio National Belge, Brussels, Belgium (or elsewhere). RNE—Radio Nacional de Espana, Spain. R. Ned.—Radio Nederland Wereldomroep, Hilversum, Holland. RONG—Radio Omroep Nieuw Guinea, Biak, (Dutch) New Guinea (Netherlands). RP—Radio Peking, China (People's Republic of China); OR Radio Pakistan, Pakistan. rpt/s—report/s. rptd—reported. rptr—reporter. RRI—Radio Republik Indonesia, Indonesia. RST—reporting code (Readability, Strength, and Tone—R runs 1-5; S and T run 1-9; used by and for code (CW—Morse) operators. RTB—Radiodiffusion-Television Belge, Brussels, Belgium. RTF—Radiodiffusion-Television Francaise, France (also, some French possessions. rx—receiver.

— S —

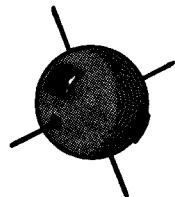
SABC—South African Broadcasting Corporation, Union of South Africa. S. Af.—South Africa(n). S. Am.—South America(n). SBC—Swiss Broadcasting Corporation, Berne, Switzerland; OR Swedish Broadcasting Corporation, Stockholm, Sweden. SCDXers—"Sweden Calling DX-ers" (DX broadcast and/or script of Radio Sweden, Stockholm, Sweden). SDR—Suddeutscher Rundfunk, Stuttgart, Germany (Federal Republic). SE Asia—Southeast Asia. sec—second/s. Serv.—Service. SIBS—Solomon Islands Broadcasting Service, Honiara, Solomon Islands. sig—signal. SINPO—reporting code (Signal strength; Interference; Noise; Propagation disturbance; Over-all merit). sked—schedule/s; scheduled; scheduling. SLBS—Sierra Leone Broadcasting Service, Sierra Leone. So.—South. So. Afr.—South Africa(n). s-off—sign-off. s-on—sign-on. SORAFOM—Societe de Radiodiffusion de la France d'Outre-Mer (a French society for improving radio in the French colonies, founded in 1946). Sp.—Spanish. spkg—speaking. spkr—speaker. SR—Sveriges Radio (Swedish Broadcasting Corporation), Stockholm, Sweden. SRK—Sveriges Radioklubb (Radio Club of Sweden); house organ is DX-Radio. "S. S. B."—"Star-Spangled Banner" (National Anthem of the USA). SSR—Soviet Socialist Republic. St.—Street. stn—station. strg—strong; strength. SW—shortwave. Sw.—Swedish. SW Asia—Southwest Asia. SWB—shortwave band. SWBC—shortwave broadcast; shortwave broadcaster; shortwave broadcasting. SWDXG—Shortwave DX Guide, house organ of the Japanese Shortwave Club (JSWC). SWL—shortwave listener; shortwave listening. SWF—Sudwestfunk, Baden-Baden, Germany (Federal Republic). SWR—shortwave radio.

(Continued on page 35)

# UTILITIES



# HORIZONS



By Tom Kneitel, WW6AA

This column is devoted to the DX-epicure, the gourmet who wants more in the way of DX than what he can pick up from the "supermarket" (SWBC and amateur) stations. We will touch upon CW as well as phone stations, as CW is the "plus," the color-TV as it were, of DXing. We'll talk about police, fire, press, ship, aero, experimental, military stations and as many other off-beat ones we learn about.

Ever hear a "dead carrier" on 6080 kc? It belongs to KQ2XAU of the Crosley Broadcasting Corp., Cincinnati 2, Ohio. Licensed as an experimental International Broadcast station, it is operated in cooperation with the National Bureau of Standards. They are on when none of the other Crosley SWBC stations are using the channel. They run their call in CW every 30 minutes. Write to J. M. McDonald, Asst. Dir. of Engineering, for verification should you hear this one.

Speaking of the National Bureau of Standards, they are testing on 60 kc. (long wave) over station KK2XEI in Boulder, Colo., soon to change its call to WWVB, the station operates continuously on weekdays.

Since we'll be approaching the South Pole exploration season, you might like to get the low-down on where to hear some of the stations operating there to prepare for your DX attack. Here are the bases most often heard.

CAT2U—O'Higgins	LOK—Oreadas
FGB2—D'Urville	VLV—Mawson
LOE2—Elsworth	ZRP—Goug I.
LOE—Deception	VLZ—Davis

The ships heard are:

LAYA—Polar Bjorn	NIQC—USS Burton
LOCI—Chierciano	Is.
LOPP—Bahia Aguirre	UOAV—T/Kh
LORN—San Martin	Kooperatsiya
NAAO—USS Glacier	USDV—D/E OB
USAF—K/B Slava	

Popular frequencies (kc) are: (voice and CW)

8490—USSR	12867—USA
10350—USSR	13087—Argentina
11040—USSR	15845—Australia
12380—Argentina	16580A—Chile
12440—USSR/U of SA	17156—USA
12708—Norway	17223—Argentina
	17695—France

Recently the SS Brasil has been reported sending out a regular ham-type QSL card. Their call is WMDT and they are often heard on both phone and CW working coastal telephone and telegraph stations. Send reports to Jacob Littman, C.R.O., SS Brasil, C/O Moore-McCormack Lines, 5 Broadway, New York 4, New York.

One of the more elusive countries on the SW bands is the Falkland Islands. SWBC listeners have been listening with both ears for months and still only a few have managed to snag their local SWBC station. Jim Cumbie of Dallas reports hearing station VPC5 at Port Stanley daily at 1600, 1700 and 1900 GMT. They have also been heard irregularly at other times between 1600 and 1900. His QSL is signed by W. H. Roberts, C/O The Colonial Secretary, Port Stanley, Falkland Islands.

Have you ever heard "Prince Christian Radio"? It's a real rare one but can be snagged with not too much trouble if you know where to listen. It's an aero station in Greenland. They hold down the fort on 2868, 2945, 5626.5 and 8913.5 kc. (all voice). They will QSL, however, since there is no mail service (the only physical contact with the "outside world" is a few weeks in the latter part of the summer) you should address reports to: Prince Christian Aeradio, Greenland, C/O Groenlands-departementet, Torvegade 1, Copenhagen K, Denmark.

Let us hear of your off-beat DX-ploits and we'll let the other DX-perts share them. T.K.



# MEDIUM WAVE HORIZONS

By Glen Kippel

By the time this is read, your Editor will have established residence in Tulia, Texas. The new address will be in next month's DXH. Meanwhile, reports may be sent to your Editor in care of Radio Station KTUE in Tulia, Texas. DEADLINE . . .

For the new DXing Horizons Medium Wave section is the 20th of each month. Please use EST in all reports, and make all reports *complete, concise, and accurate!* MANY THANKS!

## Americas

550 JAMAICA—R. *Jamaica's* on 0455 atop QRM, on 4-10. This is Montego Bay. (Millar, Washington)

1000 NEW ZEALAND—The new 1ZD, Tauranga logged 01410-030. (Millar)

1020 TONGA IS.—ZCO, Nuka'alofa logged very briefly 0300 under KDKA, at apparent s-off, on 4-13. (Millar)

1040 AUSTRALIA—5PI, Crystal Brook, SA, tentatively 0655-0715, 4-2. (Millar)

1040 NEW ZEALAND—4ZB good w-time call 0613, 3-12. (Millar)

1040 TAIWAN—BED26 tentatively ID 0800-0830, 3-26; vy different programming to that hrd two weeks earlier, which was probably Peking. (Millar)

1170 HAWAII—KOHO, Honolulu, logged vy briefly 0255-0300, 4-10 in Japanese. (Millar)

1510 AUSTRALIA—2NA, Newcastle, NSW, ID 0600, 3-12 and 4-9. (Millar)

1510 JAPAN—JOTC, Aomori, ID 0800, 4-2. (Millar)

## Atlantic

602 SWEDEN—*Radio Nord*, Kammakargatan 46, Stockholm is now on RS 0000-1800 daily, but with only 10 kw, as they can't mix the two XR's OK. (Ericson, Sweden)

701 SOMALI—BBC Berbera, Somali, now on

the air w-150 kw and going to 300 kw. S-on 2245 in Somali. (Ericson)

900 BRAZIL—ZY123, R. Nordestee, Natal, hrd vy good 2100 w-ID. The station will QSL 100% if your reports are sent to the Commercial Director. (Ericson)

920 PARAGUAY—ZPI, R. *Nacional del Paraguay*, Asuncion, hrd 4-4 w-S6 at 2130. Vy difficult to QSL. (Ericson)

1097 SPAIN—EOPE46, R. *Popular de Albacete*, Calle Mayor 18-1, Albacete, is a new station hrd nicely. Sked 0600-2000. (Ericson)

1330 BRAZIL—R. *Difusora do Para*, in Belem, is a new 10,000-watter w-vy fine pgms to s-off 2200, hrd 4-3 w-S6 2130. (Ericson)

1375 ST. PIERRE—R. *St. Pierre et Miquelon* hrd in England arnd 2000. (Ericson)

1484 MOROCCO—WNAF, US Air Force Radio, Port Lyautey, hrd some nites arnd 2100 w-DJ pgm. (Ericson)

## Pacific

580 JAPAN—Probably JODF Morioka testing here 1338 4-12. (Robinson, N.Z.)

940 PHILIPPINES—DYCR Damaguete City religious progs to Eng. s-off 0900 4-9. (Robinson)

1088 ALBANIA—Tirana fair sig 1335 on 3-30. (Robinson)

1241 FRANCE — RDTF badly QRMD by Tiraspol but logged 1335 3-28. (Robinson)

1385 GREECE—Athens logged w-heavy QRM from Kaunas 1333, 4-12. (Robinson)

1448 ITALY—Turin logged fair 1324, on 4-5. (Robinson)

1457 ENGLAND—Clevedon logged w-ID as West of England Home Service 1340 3-14. (Robinson)

1562 International Waters—R. Veronica ID by woman announcer 1415. (Robinson.)

G.K.

# OUR MAN IN WASHINGTON

Keeping an ear to the ground is a *must* for any magazine that hopes to bring the latest news to its readers. At CBH this is more than a must, it's one of the "Ten Commandments" of our editorial policy.

In line with this thinking, CBH Publisher Bob Cooper journeyed from California to Washington, D.C., to hold an exclusive interview with Mr. Charles R. Weeks, head of the *Federal Communications Commission's Land Transportation Division*, the office in charge of Citizens Radio.



"Our Man in Washington" found Charles R. Weeks a very informative and cooperative department head at the FCC.

Since the topic closest to many readers' hearts is violations of Part 19 (the CB rules) we naturally hit Mr. Weeks with this subject first.

Apparently this is just as prominent in the F.C.C.'s mind because Mr. Weeks replied, without hesitation, that section 19.61 is the one which causes the most grief to CB'ers. This section pertains to permissible types of communications. Mr. Weeks himself believes that reasonable care in the reading of the section would eliminate this type of violation. He didn't feel that most of the violations were willful, but rather are born from misconceptions CB'ers have from hasty reading of the rules.

He also noted that if potential CB'ers would read Part 19 *before* applying for a license, many would realize that the types of communications which they desire are not permitted on the band. This would not only save the F.C.C. a lot of time, but would save the user considerable investment in equipment which cannot be used.

We then asked Mr. Weeks to clarify this statement by explaining, in informal terms, exactly what the proper use of the service is, since there seems to be so much confusion on the subject.

He replied, "*We look upon the CB service as a medium for necessary communication, whether it be for personal or business use. In contrast with the Amateur Service, which is more of a service in which people communicate for the sake of communication.*

*CB is intended as a channel of communications in connection with other activities."*

We then asked the CB'ers' \$64,000 question, "What goes with long distance communications?"

Mr. Weeks said, "*The communications are, by rule, confined to ground-wave propagation distances.*"

"Naturally," he added, "*this is a very rough criteria, and in many cases the content of the communication (more than the distance) may be the deciding factor as to what is, in the final analogy, permissible.*"

In view of the fact that a number of so-called "commercials" on 27 mc are grumbling about the interference they are experiencing on the band, we queried Mr. Weeks as to whether any of the Class D CB'ers had abandoned the 27 mc band to move up to the relatively "uncluttered" 460 mc Class A CB service. Our point was that perhaps these people who are in business have had their appetites whetted on the advantages of 2-way radio to the extent that they would switch to new equipment if they couldn't get what they wanted on Class D frequencies.

Mr. Weeks told us that the Class A service is growing, but not at any spectacular rate. He did say that there was a "considerable" increase of interest in the service of late.

We got around to the subject of CB license applications, and why so many were rejected by the Commission.

Here we were surprised to learn that a prime reason for "bounced" applications involves the question of "who actually is the licensee being issued to." As an example, Mr. Weeks

pointed out that a CB license is granted for the benefit of the licensee himself and not for the employer or some other person connected with the licensee. As an example, Mr. Weeks let us inspect several of the applications which were on his desk falling into this category.

One application was from a fellow in South Carolina who said that because of the fact that he was on call for his job 24 hours a day, he wanted the CB license so that his employer could contact him at any time, day or night. The F.C.C. felt that under the circumstances, the license should have been applied for by the man's employer since it was for the employer's benefit that the man be on 24 hour call.

Another prime reason for rejecting CB applications involves high school, junior high school, junior college and college instructors and professors. Mr. Weeks stated that CB is not to be used as a means of education for training students in radio operating techniques. He said that if they want to use it as an actual communication tool between field parties or something in that nature, the CB license would be applicable. However, if it was to be used with two units (as an example), one in one class-room and one in another, then the CB service would be being used improperly. There are intercoms and a number of other non-radio devices for inter-room use in training in communications techniques are available without going to radio.

On the subject of CB antennas, we asked Mr. Weeks a hypothetical question about an amateur radio operator who might be using a 10 meter ham band antennas on a 30 foot tower for 11 meter CB work.

In a word, the answer is "no." The reason being that even though there are no questions involving antenna height for ham operations, the fact that the *same* antenna is doing double duty and is above 20 feet while radiating on 11 meters makes it illegal CB operation, even though the structure was existing previously to the second use. In other words, the antenna may *not* be used for dual functions unless it is legal for CB irregardless of its other function.

We next discussed the problems of a CB club station and we learned that very few had been granted and that very few would be granted in the future, the reason being that the CB club *as a group* must show a real communications need. He said that to the best of his knowledge no such real need had been shown, although he had no answer as to why

any CB club station licenses have so far been processed.

Mr. Weeks requested that we pass along to our readers information to more clearly define the purpose of a CB license, and why it is granted.

When the equipment is to be used for business purposes *the exact kind of business must be specified on the application*.

It seems that the backlog of applications at the Commission is due strictly to defective applications, and that 30 to 50% of all CB applications must now be returned to applicants.

One of the possible causes of the large number of defective applications, Mr. Weeks said, were the application instruction sheets provided by CB manufacturers with their units. These instruction sheets show sample CB licensee applications filled out and when the prospective CB'er sees the sample form filled out so nicely he often copies it almost word-for-word. As a result, a raft of "stereotyped" applications are flooding the Commission. He also pointed out that often a certain area's applications all seem to be similarly stereotyped, and this is possibly because all the applications are being completed by the local distributor of CB equipment. He said that in no case would action be taken on applications submitted in this manner, although in the future some particular action will be taken in the manner in which applications are filled out. Certainly the CB applications are written simply enough for anyone to fill out without any outside help and without resorting to direct copying jobs from manufacturers' sample forms.

The F.C.C. does not at present intend modifying the CB license applications, though they are considering the merits of their present instruction sheet which contains instructions for filing for all classes of CB licenses (A, B, C, and D). He admitted that the Class CB license instructions are considerably more complicated than those for B, C and D stations, and that A stations' application instructions may soon be handled separate and apart from the other classes.

Class A stations, which may run 60 watts plate power input, are being used at the present time by broadcast industry people, TV people and Microwave people desirous of obtaining relatively inexpensive two-way communication for point-to-point messages.

Our next question was one about which CB'ers have been wondering for a while—exactly who at the F.C.C. processes the CB ap-

plications and where are they processed?

Mr. Weeks told us that the volume of CB applications became so heavy that a special staff of eight people was set up to handle only CB applications. This staff operates from Gettysburg, Pa. The applications are received in Washington and sent directly to Gettysburg (which is in the Washington area) for a quick checking over. If they seem to be OK they are passed right through the processing mill. If the application is a "problem" it is sent back to Washington or returned to the applicant. Mr. Weeks and his staff are the ones who review the applications which are returned to Washington from Gettysburg for study.

Our final question was one which has had CB'ers buzzing for months. We asked very bluntly if, in view of all sorts of rumors, the F.C.C. had plans to change any of the sections in Part 19. Mr. Weeks straightened out the records by stating flatly that there were no immediate plans to modify Part 19.

We wish to thank the F.C.C., and Mr. Weeks personally, for the courtesy given too, and the interest shown in, Horizons Publications and CB Horizons Magazine. We have received the F.C.C.'s assurances that they will be happy to work closely with us to keep CB HORIZON'S readers the most informed CB'ers on the air.

T.K.

ALL NEW . . . ALL TRANSISTOR

the OSBORNE 300  
2-WAY RADIO

Office to mobile units or marine, the OSBORNE 300 offers the optimum in "Class D" 2-way radio communications. From its compact size, only 1 1/8 x 6 x 7 inches, through its advanced circuitry design, the OSBORNE 300 achieves the dependable communications you want at the price you want . . . with "OSBORNE SELECTIVITY" — the exclusive feature that separates overlapping channel interference in the 27 megacycle frequencies. \$149.50 at OSBORNE communication headquarters everywhere.

The perfect companion . . . OSBORNE'S DUO-COM 100 walkie-talkie \$99.50 ea. or the DUO-COM 100S with squelch at \$119.50 ea.

OSBORNE ELECTRONICS CORP. Dept. A-18  
13105 S. Crenshaw Blvd. • Hawthorne, Calif.  
Please rush me complete details on your OSBORNE 300 DUO-COM 100 DUO-COM 100S  
NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

## CB Matching Funds

Many cities and counties wonder why matching fund approval hasn't come down from Washington for Civil Defense purchase of CB equipment. Several factors stand out. One is that certain CD budgets allow the purchase of CB equipment with state matching funds and some federal without approval. It's all how the paper is shuffled and CB and DXing Horizons will carry an article on this shortly.

The big stumbling block, however, is that few CB manufacturers have taken the trouble to write the Office of Civil Defense and Mobilization, Washington 25, D.C., to get the rules and details which outline how they may modify their equipment to qualify for matching funds. Other than meeting certain structural standards and having housing such as bags for carrying and having the set painted yellow, and a few other requirements, there are several CB sets now on the market which come close to meeting the CD standards.

## Books of Interest

"CITIZENS BAND RADIO HANDBOOK," by David E. Hicks. Published by Howard W. Sams Co., Inc., Indianapolis, Ind. 192 pages. Soft cover. \$2.95.

This book is a handy reference guide for any CB'er to keep around his shack and will come in especially handy for CB service shops.

Written in direct, uncomplicated terms, the book covers all aspects of CB—the rigs, antennas, installation, maintenance, operation. Some circuitry is also included. A useful five-page glossary at the rear of the book gives a wealth of oft-heard but not-oft-understood words with which CB'ers are frequently confronted.

"JONES NORTH AMERICAN AM-FM-RADIO-TV STATION LISTINGS — 1961 EDITION," by Vane A. Jones Co., 3749 N. Keystone Ave., Indianapolis 18, Ind. 95 pages. Soft cover. \$1.00.

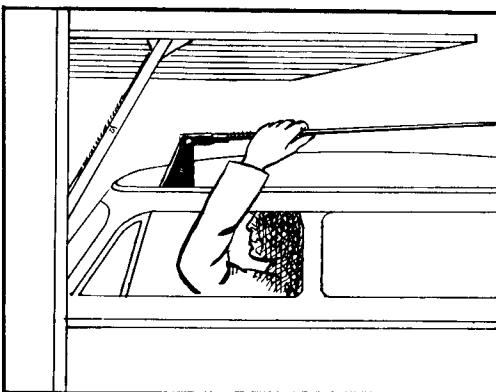
7,000 stations are listed in this edition which contains "thousands of changes" from their last year's edition. This is a *must* for every DX'er who is interested in keeping track of North American broadcasting stations. AM and FM stations are listed both geographically and by frequency and TV stations are shown geographically. A chapter on how to DX is also given.

-T.K.

## CB SHOWCASE

(Continued from page 9)

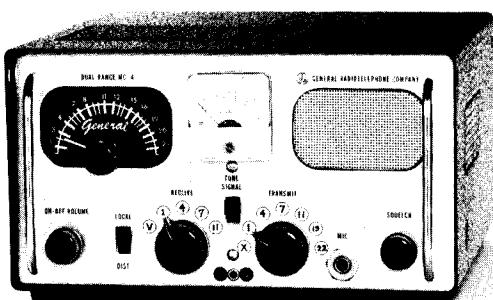
*Marina Communications* has come out with a new antenna, the *Buddy Whip*, a 96 inch fibre glass deal which jiffy mounts on your car's rain gutter. The novel mounting base permits you to reach up and yank down the whip when passing under obstacles such as trees, garage doors, low bridges, etc. A feature of the *Buddy Whip* is that it gives up to 10 db gain over bumper mounted antennas. It comes complete with all hardware, 52 ohm coax and mounting instructions. *Marina's* home is at 10328 Venice Blvd., Culver City, Calif.



Buddy Whip Bends Down for Garages

We would like to pass this word along to the many manufacturers who have inquired as to our product reporting policies. Although we would like to cover as many products as possible here, please understand that there are space limitations in every magazine, even CBH.

## FLASH!



This is the brand new MC-4 unit from General Radio-telephone. Not yet on the market, CBH will report on our lab tests of the unit in July. Remember—You saw it first in CBH!

## Riding The Channels

### With Marine CB

CBH has been informed of the contents of a technical paper presented to the Spring Convention of the Radio Technical Commission for Marine Services by Mr. J. Leonard Lovett, marketing manager for Raytheon's marine products.

Citing the fact that the total number of licensed marine radiotelephones will double to 180,000 over the course of the next five years, Mr. Lovett suggested increased use of the CB to relieve some of the very heavy small boat communications traffic on marine frequencies in many popular boating centers.

He wrote that because of the present inability to call the Coast Guard on 27 mc. equipment, a single channel should be set aside in each boating area for use as a safety and distress channel. The Coast Guard would then be urged to monitor this channel on a local basis.

#### MARINE DF FOR CITIZENS BAND

A well-placed official of the Coast Guard has indicated that if CB manufacturers would bring out a CB unit capable of sensing or determining direction with automatic or manual loops, that the safety to marine navigation could be greatly improved as far as small boat operators are concerned. CB Horizons directed a question to several engineers active in the field of marine DF equipment and found that the problems associated with such a design are already solved and all that remains is to incorporate existing hardware into production equipment.

Coast Guard and other officials expressed high hopes for such a plan and pointed out that even small 12 foot outboards could have the advantages of DF on Citizens band. For instance, a person lost in the fog could call for assistance on a 100 mw walkie talkie, which over water has a potential range of several miles. Another boat, with suitable Citizens band equipment capable of taking bearings, could track down the lost boat, or provide him with bearings to progress to the larger boat.

Boat harbors or marines could give bearings to any boat who wanted it. This could be a real safety factor and greatly increase the usefulness of marine CB. Another point, made by a high-placed government official, was that the Coast Guard could place small 100 mw. automatic solar powered transmitters with coded

(Continued on page 34)

# A MESSAGE FROM THE EDITOR

Not long ago a fellow who lived in my apartment house back in New York dropped in one evening for a visit. Seeing the CB rig on my desk he asked what it was, how it worked, you know—the usual questions. As the discussion progressed he became genuinely interested in CB, so much so that he prevailed upon me to immediately dig up an FCC application and help him fill it out right then and there—which I did. He rushed it down to the corner drug store to get it notarized before they closed for the night. About twenty minutes later I heard my doorbell frantically ringing. Opening the door, I saw my friend huffing and puffing so hard that it was obvious that he had run all the way back. He hurried in and stuck out his open hand, saying, "Quick, give me another one of those FCC forms!"

Startled at this I asked him if he had lost the one we had just made out.

"No," he replied, "the druggist asked me what kind of a form it was and when I told him about Citizen Radio he insisted that I get him an application too!" All this is by way of saying that I feel, as I have always felt, that CB is here to stay. It's a useful drink of science and electronics given to the thirsty public—a public which has needed and wanted its own low-cost private communications for many many years.

Useful Class D CB came into being in September of 1958 and in the summer of 1959 my column "ON THE CITIZENS BAND" began in *Popular Electronics Magazine*. In the ensuing thirty months CB has grown from a small struggling "problem child" into strong young adult, and just as the clothes which once so well fit a child cannot fit him when he has grown into an adult, neither can limited space, even in such an outstanding publication as *Popular Electronics*, now fit CB which must have a magazine of its own for adequate coverage.

This is the reason why I have accepted the position of Managing Editor of CB Horizons Magazine. I do want to, however, express my sincere thanks to the gang at *POP'tronics* for

the faith they expressed in CB for letting me stick in my two cents worth on the subject each month.

So here we are with our own magazine, and living right next door to us in the binding of CBH is DXing Horizons—the bible of the DX-ing, or "SWL'ing" hobby. DXing, the hobby of listening on long, short, and medium waves for distant radio stations is one of the oldest hobbies in electronics. I'm proud to have been affiliated with SWL'ing for a number of years, and I sincerely hope that SWLs who, by the way, have also needed their own publication for a long, long time, will continue to support DXH as they have in the past.

CB/DXH is more than "just a magazine," we want our readers to feel that they are always free to drop in to our offices at 1016 14th Street, Modesto, when they are in the area. We feel very strongly about establishing and maintaining a close personal relationship—no, better yet—"friendship," with CBers and DXers.

Readers will also find that, unlike most other electronics magazines, there is *no "writer's barrier"* at CB/DXH. You don't have to be one of a select few professional writers to see your name in print here.

If you have an idea for an article you think would be of interest to other readers drop us a card and let us know about it. We'll check to see if it's been assigned to another author and get right back to you on it. *Don't send the complete article in to us without our asking to see it.* If we accept your article you'll, naturally, receive a payment at our current prevailing rates.

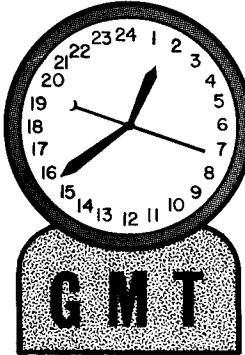
We don't expect to receive a John Steinbeck calibre manuscript from you—don't worry. All we ask is that you submit your stuff typed and spaced at forty characters across, and that it contain all the facts you are trying to get across. Let us get headaches about editing and re-writing.

*Tom Kneitel, 2W1965*

# ENGLISH LANGUAGE

## SHORTWAVE

## HORIZONS



*"A monthly review of 'casts heard in North America in the English Language"*

By A. R. "Al" Niblack

### MONTHLY LISTENING TIPS

The following listing consists of stations currently heard throughout North America during their ENGLISH language sessions.

(Times to tune are in the 24 hours GMT, frequencies in megacycles. EST subtract five hours, CST subtract six hours, PST subtract eight hours).

#### EAST COAST NORTH AMERICA AREA

BRAZIL—R. *Poti*, Natal, 4.935, 0240-0300 Sats., Sunds., ONLY) (Acknowledgement to Newhart, AMSWLC, N.J.).

CANADA — R. *Canada*, Montreal, 9.585, 11.720, 0100.

CONGO REP. — R. *Brazzaville*, Brazzaville, 11.725, 0120.

(REP. OF) THE CONGO — R. *Congo*, Leopoldville, 11.755, 0145.

CZECHOSLOVAKIA — R. *Prague*, Prague, 5.935, 7.345, 0300.

DAHOMEY—R. *Dahomey*, Cotonou, 4.875, 0615 (during French-English lessons)

EGYPT (UAR) — R. *Cairo*, Cairo, 11.915, 2200.

GERMANY (WEST)—DW, Cologne, 11.925, 2115.

ITALY—RAI, Rome, 9.575, 11.905, 0030.

PAKISTAN — R. *Kakistan*, Karachi, 11.674, 1830.

VATICAN—Vatican Radio, 15.120, 1830.

USSR—R. *Tashkent*, Tashkent, 11.690, 1400-1430.

CENTRAL USA AREA (acknowledgement to Rowell, Minn.).

BULGARIA—R. *Sofia*, Sofia, 9.700, 0100.

ENGLAND—BBC, London, 9.510, 0045.

HOLLAND — R. *Nederland*, Hilversum, 11.730, 15.445, N-E, 2117A.

HUNGARY—R. *Budapest*, Budapest, 9.833, 0015-0045.

LIBERA — ELWA, Monrovia, 11.825, 0200 (Weds., only to No. America).

NIGERIA—NBS, Lagos, 4.990, 0500. 195, 0430-0500.

PORTUGAL — EN, Lisbon, 17.895, 1730-1755.

TAIWAN—BBC, Taipei, 17.785, 0130, 0200.

USSR—R. *Moscow*, Moscow, 9.605, 9.680, 9.725, 9.760, 0030-0100.

#### WEST COAST NORTH AMERICA AREA (Acknowledgement to Balbi, Calif.).

AUSTRALIA — R. *Australia*, Melbourne, 9.-565 (NEW), 1000-1730.

JAPAN—NHK, Tokyo, 11.800, 15.135, 17.-725, 21.520, 0415-0500.

KATANGA STATE — R. *Katanga*, Elizabethville, 11.866, 0700; 2015.

KOREA (SO.)—Voice of Free Korea, Seoul, 11.925, 15.125, 0530-0600; 15.125, 0730-0800.

MONACO—Trans-World Radio, Monte Carlo, 9.690 (NEW), 0630-0700 (NEW time).

POLAND — R. *Warsaw*, Warsaw, 11.800A, 15.275, 0730.

SINGAPORE—BBCFES, Singapore, 11.955, 15.435, 0910-0930.

SWITZERLAND—SBC, Berne, 6.165, 9.535, 11.865, 0130.

SWEDEN — R. *Sweden*, Stockholm, 11.805 0145; 0315.

VIETNAM (NO.) —Voice of Vietnam, Hanoi, 9.840, 1000-1030; 1330-1400.

VIETNAM (SO.) — VTVN, Saigon, 7.265, 1330-1430.

NEW ZEALAND—R. *New Zealand*, Wellington, 15.280, 1700-2200.

CHINA—R. *Peking*, Peking, 11.820, 15.060 17.810, 0300; 15.060, 17.835, 0830.

See you all next month. A.R.N.

## ANTENNA TOPIX

(Continued from page 18)

Various solutions are offered to overcome this problem. One manufacturer (H4—Gain Model CLR) feeds a full half wave antenna at the base through a voltage matching network. This lowers the main angle to fifteen degrees off the horizon in all directions, which is a great improvement over some ground plane antennas. Gain can be in the order of three to four db over most other ground planes. However, this same antenna has its half power point on the horizon, which means it's useful signal angle (horizontal) is still three db down from the major lobe. Thus, the net gain over a reference dipole is little and such an antenna may be considered to have a unity gain figure. However, keep in mind this antenna does have a gain of up to three db over many commercial antennas on the CB market. In short, it brings your effective one watt *back up* to the three watts where it belongs! A few manufacturers provide matched antennas which do place the major lobe on the horizon, offering the CB user unity (zero) gain. In general the conical ground planes and some side mount dipoles and coax sleeves with quarter wave isolation stubs fit this category.

—A.B.

*\*(Editor's note: We hope that you are aware of the fact that the FCC has established maximum permissible heights for CB antennas, and while under certain conditions a CB antenna may exceed twenty feet in height, CB'ers should carefully check Part 19 to see if their station is LEGALLY above twenty feet.)*

## MARINE CB

(Continued from page 31)

identification on various hazards to navigation. These transmitters would operate on frequencies just outside the Citizens Band and would be capable of being received by any tunable CB rig, or by marine CB units with switchable crystals to the one or two frequencies the Coast Guard warning signals would mark out.

If CB readers feel such a system would warrant further development, drop us a note and we will turn these over to interested manufacturers for evaluation.

Manufacturers please note: If you are interested in receiving this data, let us know.

We will follow up on this, as we at CB Horizons feel this is a simple solution to the increased safety and usefulness of CB radio on the water.

## WHAT EVERY SWL SHOULD KNOW

(Continued from page 14)

be enclosed. I find that a personal letter seems to bring the best results in obtaining a verie." DXH: "Well gentlemen I think we should get into the actual technical operation and understanding of the equipment and the understanding of the behavior of the DX bands. Gentlemen . . . gentlemen?? Where are you? Oh, I forgot, they all had a special DX program to catch (the DXH show on WRUL every third Saturday). We'll have to wait until the next issue to catch them.

## CBH PETITIONS FCC

(Continued from page 16)

gineering and development through responsible manufacturers active in the field, that it behooves the Commission to act favorably on this request for modification of the rules.

Submitted, this 10 day of April, 1961

By Robert Britt Cooper, Jr., Publisher  
Horizons Publications

## CB "COORDINATOR" RETIRES

Charles R. Weeks, FCC Land Transportation official who so graciously provided CB Horizons with the exclusive interview found on pages 28 and 29, and head of the Services Administration Branch since 1956, retired April 21 after 27 years of service at the Commission.

Mr. Weeks joined the FCC in 1940 at Portland, Oregon as Assistant Monitoring Officer. During the second world war he served in South America doing undercover radio intelligence work.

He became head of the Land Transportation Division licensing processes in 1956.

## CLASSIFIED

Classified rate \$5.00 per column inch, non-commercial displays. Commercial displays \$10.00 per column inch. Limited to three column inches per issue.

**FROM OUTER SPACE** — The "Q-BIRD" signal tone device—easy to install in minutes. "Q-Bird" tone will give your station its own personality that will be easily recognized by all of your friends and mobile units. "Q-Bird" tone cuts through QRM, heterodynes and diathermy. **Price \$3.50 postpaid.**

### TWO-TONE ELECTRONICS

948 North Spaulding  
Hollywood 46, California

## RADIO SWAN

(Continued from page 7)

The impact of the United Fruit Company holdings on the Castro agrarian reform program might best be summed up by this direct quote from Fidel Castro's book "*History Will Absolve Me.*"

"... Eighty-five per cent of the small farmers in Cuba pay rent and live under the constant threat of being dispossessed from the land that they cultivate. More than half the best cultivated land belongs to foreigners. In Oriente, the largest province, the lands of the *United Fruit Company* and *West Indian Company* join the north coast to the southern one."

Shortly after Radio Swan went on the air Castro's agrarian reform program completed its "consumption of foreign holdings" by taking over the *United Fruit Company* property in Oriente Province..

At present, Mr. Cabot heads Godfrey L. Cabot, Inc. (of Boston), a holding company with large overseas accounts and holdings. Mr. Cabot was busy and not available for comment when DXH tried to reach him.

With the above facts, one can only speculate as to the motives behind RADIO SWAN.

A possible answer to the whole story was found in the May 1, 1961, issue of *NEWSWEEK MAGAZINE*. In that issue they state "RADIO SWAN, a station operated by the Central Intelligence Agency on Swan Island, a U.S. possession..." We don't know where they obtained these "facts," however perhaps they put together a few of the items known to us and came up with the statement.

For instance, if you put the facts about Mr. Cabot's State Department background and government connections together with the facts about the FCC's highly unusual action (or lack of action) in the RADIO SWAN matter, you, yourself, might figure that the CIA had a hand in the station.

We have our own theories on RADIO SWAN, they may or may not agree with *NEWSWEEK'S*. You may be able to come up with a few of your own after reading this report.

What the true motives are, we may never know. What we do know is the effectiveness of the broadcasts. In order to bring you is complete a story as possible, DXH called up the Cuban Mission to the U.N. and asked to speak to a delegate. The woman who answered the phone identified herself as a delegate but refused to give her name. We told her who we were and asked if she had any statement to

make about RADIO SWAN. In a split second she told us more about the station's worth as a propaganda tool than we had heard from any other source. Her entire statement consisted of a loud and resounding "NO!" and slamming down the receiver.

If success is based upon what one tries to achieve, then certainly RADIO SWAN is seemingly one of the most unsuccessful commercial radio stations in these parts. On the other hand, RADIO SWAN is probably the most successful propaganda station to hit the kilocycles since the *Voice of America*, *Radio Free Europe* and Radio Liberation. Obviously the true measure of their success can be determined only by learning what they are trying to accomplish—making money, or helping Fidel into the refuse heap. It's apparent that they can't do both at the same time, and it seems that they really couldn't care less. In any case DXH wishes them success!

—T.K.

## SHORTWAVE ABBREVIATIONS

(Continued from page 25)

— T —

TBC—Tanganyika Broadcasting Corporation, Dar-es-Salaam, Tanganyika. TBT—total broadcast(ing) time. tnx—thanks. TV—television. TWR—Trans-World Radio, Monte Carlo, Monaco.

— U —

UAR—United Arabic Republic (Egypt, Syria). UBR—Ulan Bator Radio, Mongolia (People's Republic). UBS—Uganda Broadcasting Service, Kampala, Uganda. UER—Union Européene de Radiodiffusion (European Broadcasting Union), Geneva, Switzerland. UK—United Kingdom. UNID—unidentified. UNR—United Nations Radio. URDXC—Universal Radio DX Club, Vallejo, California, USA; house organ is Universalite. USA—United States of America. U. S. Af.—Union of South Africa. USSR—Union of Soviet Socialist Republics.

— V —

V—varies (in frequency); varied; varying. veri—verification; QSL; confirmation of reception. verified—verified; confirmed. veries—verifies; verifications. VHF—very high frequency. VOA—Voice of America, USA (and relay points). voc—vocal/s (music). VTVN—Vo-Tuyen Vietnam, Saigon, (South) Vietnam (Vietnam Republic). VUNC—Voice of the United Nations Command, Japan and/or (South) Korea (Republic of). VV—Voice of Vietnam, Hanoi, (North) Vietnam (People's Democratic Republic). vy—very.

— W —

W.—West. w—watt/s; OR with. W. Af.—West Africa(n). WCNA—West Coast of North America. W. I.—West Indies. WIBS—Windward Islands Broadcasting Service, S. George's, Grenada, British West Indies. W. I. F.—West Indies Federation. wk/s—week/s. wkdy/s—weekday/s. wl—wavelength/s. Wn.—Western (type of music—or language). WRH—WORLD RADIO HANDBOOK, Copenhagen, Denmark. WRHB—WORLD RADIO HANDBOOK Bulletin, Copenhagen, Denmark.

# T.R. on C.B.

by Tom Kueitel, 2W1965

Seems that CB clubs are springing up like the proverbial "flowers that bloom in the spring (*tra-la*)," and we are grateful to the many new and old CB clubs which keep us posted on their activities. Keeping us posted is easy—a newspaper from your club will do the trick, as will a press release, even a letter—we'll even accept post cards! Send it written in crayon on a paper bag if you must—but send it! And we're on the lookout for good sharp glossy photos with lots of contrast showing club officers and activities. Send us your club's mobile decal too.

For our records we'd greatly appreciate your club mailing us a 3x5 file card containing the following information: *Club Name, mailing address, date club was founded, approximate number of members, names, addresses and call signs of club officers, local monitoring channel, local communications channels* (listed in order of most used channels first). *And geographic area from which members are accepted.* If you like, you can include information on the time and place of your regular meetings so that we can pass the information on to prospective members in your area.

We wish to thank the gang at the *Pioneer Valley 5 Watters* monthly publication, THE CARRIER, for the very generous plug which they gave CB HORIZONS MAGAZINE. We note that the Pioneer Valley club is holding a big shindig on May 20th. As we go to press they're still trying to decide whether to hold it at Belli's Restaurant or The Wayside Inn in Holyoke, Mass. If you're "down east" why not check with PVFW and see what's cooking (not only at Belli's Restaurant, but with the club). Their official mailing address is: *Pioneer Valley Five Watters, P.O. Box 989, Holyoke, Mass.*

## AN OBJECTIVE GROUP

"Certainly a club that's pointed in the right direction" is what we said when we got a look at a listing of the objectives of the 14W ASSOCIATION OF SEATTLE. Their objectives, by the way, are generally the most com-

prehensive listing-of-its-type we've ever seen—and we've seen 'em! As a matter of fact, we might even go so far as to say that, with a few very small modifications, CBH would endorse the 14W club's list and recommend that all CB clubs adopt it.

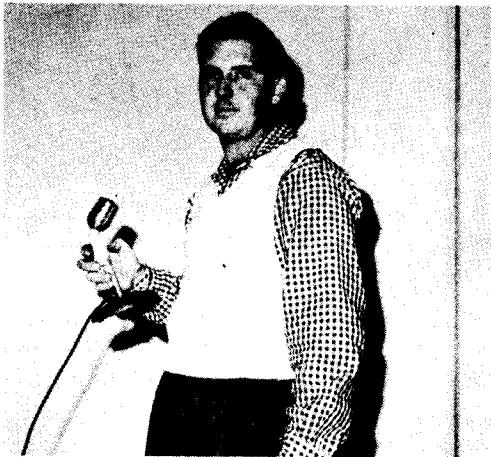
Briefly, the main points of the listing are that the 14W ASSOCIATION OF SEATTLE:

- Provides a medium through which CB'ers may coordinate their selection of frequencies for maximum communication and minimum interference.
- Promotes the expansion of the CB Service within its intended scope of utilization. L
- Participates in properly sanctioned Civil Defense activities.
- Has liaison with the FCC and makes suggestions to the FCC for the improvement of CB
- Promotes rendering public service or assistance in the following categories: 1. Civic Interest; 2. Compassionate Interest, and 3. Aiding Scientific Societies.

The club requires that their members take "appropriate steps" to eliminate, reduce, or control unnecessary interference. They say that while they are by no means anti-social, their meetings are not primarily intended to promote good fellowship on the band, but rather to conduct the business of the club. Of course the club does not sanction "hamming" or "DXing" in any form, even the cleverly disguised ones.

As we said, this is just a brief condensation of the club's objectives as outlined in their published paper. It will show you, however, that the club is an on-the-ball outfit. If your club is interested in seeing the full outline printed here (it's rather lengthy), together our comments on the various points, drop us a note and if we get sufficient response we'll be glad to comply.

Way down south in Dixie-land is a club called the *Metropolitan Dade Citizen's Radio Club*, they're in Miami, Fla. Gotta give them credit for coming up with a dandy name for



LEE MONTEITH, President, MDCRC

their monthly bulletin—they call it the “CITIZENS BAND AIDE,” real jazzy. And the paper is a pretty snazzy looking offering too. Their address is Box 48-1132, International Airport Branch, Miami, Fla.

Also in sunny Florida (for a remark like that we could get evicted from *beautiful, healthful, prosperous CALIFORNIA*) lives an interesting and *useful* outfit known as “*The Tamiami Volunteer Rescue Team*.

The TVRA started out with a handful of men who realized the need for a rescue team along Florida’s famous Tamiami Trail, a desolate highway connecting Miami and Tampa which passes through the Everglades swamp. We’ve taken this road, and take our word for it—there are many more nicer places to be stuck than on the Tamiami Trail!

The members, of course, shell out the cost of equipment from their own funds. Several radios have already been bought for the members, who operate under the call sign 7Q0020. A Bar-B-Q was held recently to dig up some additional funds.

At this time, all Miami area CB’ers who hold an Advance Red Cross Card can apply for membership in the TVRA. With the knowledge of First Aid and a CB radio you should be just right for TVRA—they say that where you live and the hours you work will not bar you from membership on the team. For further information on TVRA contact Chief Milton Wood—land line CA-1-4137. (Miami, Fla.).

#### REPRODUCTION RIGHTS

In examining the batch of club papers which has been flooding our mailbox we notice that several clubs (not many) have seen fit to reproduce pages from various electronics magazines in their own publications. Possibly the

members of these clubs are not aware of the copyright laws which protect publishers from having their works “borrowed” without their permission. One club, a large one from upstate New York didn’t even bother to remove the original page number from the work before they swiped it. If any club wants to reproduce material from CBH, in whole or part as it appears, we would greatly appreciate the club first checking with us. We will in most instances grant the permission requested — however we’ll make no bones about the fact that *certain articles in CBH cannot be reproduced under any circumstances*.

Please play safe and check with us. Chances are we’ll not only give you permission but fill you in on any recent developments on the subject contained in the article. Fair enough?



#### CALLING CHANNELS

The Racine CB Club (Wisc.) passes this information along to motoring CB’ers via their publication, THE HETRODYNE. They say that it helps to know local “calling” channels when you’re “on the road” in case you need directions or a tow. In any case, here are some of the channels you should install before wandering into the following areas.

<i>Kenosha and Western Racine and Kenosha Counties:</i>	Channel 7.
<i>Highland Park, Mundelein and northern Ill. Suburbs:</i>	Channel 9.
<i>Chippewa Falls, Eau Claire and Vicinity:</i>	Channel 7.
<i>Sheboygan and vicinity:</i>	Channel 11.
<i>Peoria, Ill.:</i>	Channel 14.
<i>Pittsburgh, Pa.:</i>	Channel 11.
<i>Richmond, Newport News, Norfolk, Va.:</i>	Channel 11.
<i>Southern California:</i>	Channel 10

CBH plans a regular monthly listing in this section of calling channels throughout the nation. With the summer time travel period rapidly approaching, why not send in your area's calling channels and get included in the list. The handy list can be cut out and tacked to your dash board for reference while traveling.

#### **CB SWAP SHOP**

We note with interest that many, in fact *most*, club papers run a column of sell or swap items—since this column is sort of a meeting place for all the clubs, how do you feel about our devoting a little space each month for a CB'ers sell and swap shop? You should be able to describe what you want to acquire or get rid of in three lines of copy (that's 120 characters and spaces), or less. Send your items to the "CB SWAP & SELL SHOP" in care of CBH with a buck. At these bargain advertising rates we must limit the offer to licensed CB'ers who are selling or swapping their own equipment. Commercial advertisers are also welcome in the column, and since we're in a generous mood today we'll figure them for-say, five bucks for 3 lines. No matter who sends in for the classifieds, individuals or commercials, we can assure you that on the classifieds, we ain't gonna get rich—that's not their purpose. The purpose is to give the individual CB'er and the small commercial CB suppliers a chance to display their wares and wants to a large audience at a cost just barely over the actual price of having the ad set in type and printed. In view of this we must ask that no single classified advertiser submit more than 9 lines per month.

#### **CBH SUPPORTERS**

Next on the agenda, as long as we were talking about money, is a chance for *you* to make some! Without very much effort you can rake it in by selling subscriptions of CBH to your friends—and we *don't* mean that we'll pay you off in credit towards subscriptions or that kind of nonsense—you'll get good old Yankee mazuma—moolah, loot—the stuff that dreams are made of. Dreams of a new CB rig or ground plane! We will also be glad to tell CB stories and distributors of our novel "you can't lose a nickel" type deal for over-the-counter individual copy and subscription arrangements. Write for details (stores and distributors on a letterhead, please). Let's not forget CB clubs—we have a swell group subscription discount offer which we'll be only too happy to tell you about if you drop us a card.

#### **BACK TO THE CLUBS**

The *Citizens Radio League, Inc.*, of Chicago, Ill., comes through with a nifty and nicely written bulletin each month. The club has grown rather rapidly and now has two branch chapters, appropriately called "Unit 1" and "Unit 2." Unit 1 meets at Mannheim Home Owners Hall, 10622 West Grand Avenue, Northlake, Ill., and Unit 2 meets at the V.F.W. Hall, 1545 West Devon Avenue, Chicago, Ill. Check with the units themselves for the specific dates and times of the next meetings. The people to contact are: Unit 1 — Joe Perry (18W5527,) Chairman, 33 South Elm Street Northlake, Ill. Unit 2 — Fred Ruedy (18A-9417), Chairman, 3222 W. Olive Avenue, Chicago 45, Ill.

In the land of oranges and sunshine (California, natch!) we've got a club called the *Trans-ceivers of Southern Calif., Inc.*, who are probably the first ones in CB with the imagination to go one step further than a newspaper to tell the public about CB and themselves. They are, in true California spirit, making a movie—in sound no less! Bob Holste, 11W-5445 is the producer. The film will depict, with rescues and all, some of the work done by the club. This is a fine idea—if such a film were made available to a local TV station it would probably be grabbed up to fulfill their public service broadcasting requirements (the FCC requires all broadcasting stations to broadcast a certain percentage of hours of public service programs for every hour they are on the air). What better way can the public be told about the advantages of CB radio, if not by CB'ers themselves. The film could also be made available for showings at Boy Scout meetings, Church affairs, Civil Defense meetings, etc. The address of the club is: *The Trans-ceivers of Southern California, Inc.*, Box 591, Pico-Rivera, Calif. If the club will send us a print of the finished film to look at we'll review it for you. This project should have been undertaken by C. B. (*Citizens Band?*) *De Mille!*

Got a note from *The Cee Banders Radio Phone Club* of Birmingham, Ala. They're about 75 strong and on the way up. They ask that all interested CB'ers in their area attend a meeting to say "hello" to the gang and consider joining. Meetings are held once a month and further information on location and time may be obtained from the club at 594 North 68th place, Birmingham, Ala. T.K.

# HORIZONS PUBLICATIONS — — ➔

Memo from the desk of  
Robert B. Cooper, Jr., Publisher

Dear CB'er:

I like the way you think! And better yet I like the way you react. Your wholehearted support and enthusiasm behind CB HORIZONS has made our very first issue far more complete and comprehensive than our fondest expectations. And, I am afraid, our enthusiasm shows. Take "Modesto Mike" (see cover) as one example. Here is a loveable little fellow just bursting with glad tidings and a welcome mat as he beckons your following through the pages of CB HORIZONS. "Mike" isn't telling all he knows...not even to your publisher...but he has told me enough to raise my "S-meter" several notches. For instance "Mike" says that CB radio is so big..so important and growing so fast that by the end of 1961 more than 800,000 licensed stations will be in use!

Obviously the hour is here for a nation wide publication to report on the "growing pains" of this..the largest single radio service in the world!

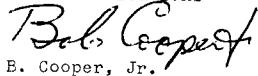
"Watch us grow" says Mike "to 48 pages, 64 pages, and then who knows..perhaps 128 pages." Mike is also quick to point out that based upon the pre-printing returns from subscribers (507 in one day alone!) The CB service will soon own CB HORIZONS lock-stock and barrel. Which, we believe, is Mike's way of hinting that as the subscriptions continue to grow and CB HORIZONS adds pages, the additional pages will be quickly grabbed up by ever expanding news coverage in the CB field.

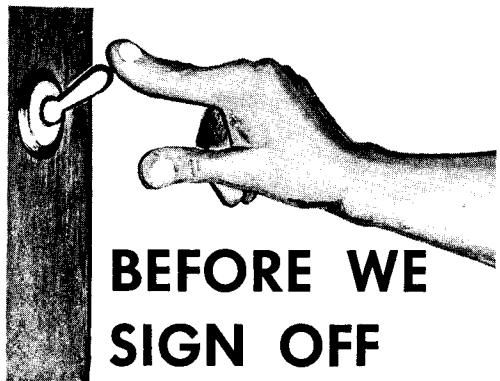
Mike's off to visit CB operators around the country this month, but even as he dashes from the office he reminds us that CB groups and individuals across the nation are adopting CB HORIZONS as "their official publication." What better time then now to see that both subscription forms (between pages 2-3 and 38-39) are torn from your book and mailed in today. Get on the air..announce to the world (or at least your unit 2) that CBH has arrived!

And finally watch out for next month...the July CBF...in the mails and on the newstand June 10. As Mike says "Wow--what a magazine."

Yours for better CB'ing,

Horizons Publications

  
R. B. Cooper, Jr.  
Publisher



## BEFORE WE SIGN OFF

# D.C. FLASHES!!!

By Rex Holmes  
"Our Man In Washington"

Late news from Washington! A "marked increase" in the number of relatively minor violations of FCC rules in "some of the newer private (radio) services" represents a "very real menace" to the "orderly use of the radio spectrum and to efficient regulations by the Commission." "Existing sanctions are inadequate to handle the situation" which confronts the agency, the FCC stresses, as they again plead with Congress to give them the authority to impose monetary "fines" in cases of violations of their rules. This is the second time around for the FCC pitch. In 1959 this bill managed to get passed in the Senate, although it died in the House.

Briefly, the bill would allow the FCC to extract up to \$100 from operators for each of 12 types of violations. Some of these violations include: Not giving call sign properly, off frequency operation, radiation harmonics, over power, improper operation and unauthorized equipment.

### FRIENDS WE GOT!

Fayette County, Ind., CD Director Hazelton F. Moody, in a letter to the FCC, has commended CB'ers in Connorsville, Ind., for emergency service performed during a recent train derailment in Connorsville.

### FCC LOWERS THE BOOM

Irregardless of some of the good things that CB'ers are accomplishing, the FCC is standing for no nonsense.

The FCC made effective a November 1960 decision and revoked the Class D license of

the Florida Marine Corp. for stations at Perry and Ft. Walton Beach, Fla.

They were swung for transmitting signals "outside of the specified frequency tolerance," and with conducting communications "beyond the normal ground-wave range" which were not "purposeful or substantive."

Mariano Richey, of Baltimore, Md., another CB'er was ordered by the FCC to "show cause" why his license should not be revoked not only for violations of the FCC's rules, but also for failure to respond to correspondence from the FCC concerning the violations. He is cited with violating 19.61 (a) (permissible communications), 19.61 (e) (overlong transmissions) and 19.61 (f) (no two minute "break").

The FCC has also terminated hearing proceedings on station 7WO423, licensed to Lloyd M. McMullen, d/b/a *Lloyd's TV*, Margate, Fla. It's now up to the Commission to make a decision, based on the examiner's recommendations, as to whether the station will lose its license.

### CANADIAN CB -- Not Around the Corner

From the *Department of Transport*, in Ottawa, Canada (Canada's FCC), CBH has received a confidential and exclusive report on the status of Canadian CB.

In spite of information published in other publications stating that Canadian CB was imminent and that a U.S./Canadian reciprocity of operation deal is probable, we have learned that the project still seems to be many months away.

The DOT sources with which we have been in contact say, "We are now completing our studies of the 27 mc. proposed CB service. However, CB in Canada is still nearly one year away."

The source also explained that Canadian officials want to be absolutely sure the nature of CB in Canada is Canadian.

Although, under present thinking, the Canadian service would be similar to the U.S. Class D service in application, the stations will probably use FM (we use AM) at 25 watts input.

The DOT plans an announcement soon on the service, although the actual opening of the band will be 6 to 8 months after the announcement. This, sources say, will be done to allow Canadian manufacturers to tool up for production. Canada apparently does not want the service too close to the American version, as a further means of insuring that the Canadian CB market place is not flooded with American equipment.

R.H.

**Available in U.S.A.**

**WORLD  
RADIO  
TV  
HANDBOOK**

*15th Anniversary edition*



**BROADCASTING  
TELEVISION**  
*1961*

*The  
15th Anniversary  
Edition*

**WORLD RADIO TV  
HANDBOOK 1961**

The 15th edition of this WORLD FAMOUS handbook is now available.

**WORLD RADIO HANDBOOK** is the only handbook containing complete, exact information about all sound and video broadcasting stations in the world. Information in the new improved edition includes data on station operating frequencies, power, hours of transmission, interval signals, senior staff members, etc.

The **WORLD RADIO TELEVISION HANDBOOK** is an invaluable reference manual for all who are interested in broadcasting, who wish to keep in touch with broadcasting expansion around the world, and who wish to locate particular stations and transmissions.

The **WORLD RADIO TELEVISION HANDBOOK** is a concise survey of sight and sound transmitters, and a ready 212 page manual detailing all phases of shortwave—medium wave—TV and FM broadcasting and reception.

WRH's long established reputation as "the manual for ready reference to worldwide broadcasting" has won it acclaim from every major broadcasting organization in the world. The **WORLD RADIO TELEVISION HANDBOOK 1961** is recommended by UNITED NATIONS (UNESCO), RADIO AUSTRALIA, the CANADIAN BROADCASTING CORPORATION, RADIODIFFUSION-TELEVISION FRANCAIS, ALL INDIA RADIO, NHK-Broadcasting Corporation of Japan, the VOICE OF AMERICA, and other leading broadcasters.

**16,000 copies to be circulated, 1961!**

Published annually by O. Lund-Johansen, Lindorfsalle 1, Hellerup-Copenhagen, Denmark.

Printing: 16,000 copies. 216 pages. Price: includes postage, U.S.A. \$2.70.

Brochures and notices are available upon request.

SUMMER SUPPLEMENT TO THE WRH 61. Price \$1.00.

WORLD RADIO BULLETIN. Prices: Airmail: Annually \$5.65. Quarterly: \$1.50. Ordinary mail: Annually \$3.50. Quarterly \$1.25.

For your copy, order now! (In North America)

**GILFER ASSOCIATES, Dept. D**

**P. O. BOX 239, GRAND CENTRAL STATION, NEW YORK 17, NEW YORK**

**Price (including postage) \$2.70 Per Copy**



**RADIO PRODUCTS SALES INC**

**Exclusive West Coast Distributor INTERNATIONAL CRYSTAL COMPANY**

**NEW  
Executive 50  
in Stock**



MODEL 50

**R.P.S. Specialized Service  
Includes**

- Extended Six-Month Warranty
- Ten (10) Day Free Trial
- Time Plan Bank Terms
- Bankamerica card
- Three (3) Month R.P.S. Financing (no interest charges)
- Mail Orders Shipped Same Day Received
- Call in Your Order Collect (RI 8-2171, extension 209, 210)

**Only \$149.50 List**

- Improved Dual Conversion Receiver
- Super Modulation
- Superior T Squelch
- Silicon Diode Power Supply

**Specials of the  
Month**

- \* 20% Over-Allowance on Trades
- \* SPECIAL—Ward 102" Stainless Whip (list price \$29.20) Your cost \$7.95 with heavy duty base and spring
- \* SPECIAL—Hy Gain Colinear Ground Plane (list price \$49.95) Your cost \$29.95
- \* SPECIAL—FREE two-year subscription to *CB HORIZONS* with your purchase of any new model 50 or 100!

**CB HEADQUARTERS FOR THE GREAT SOUTHWEST!**



**18 Active Employees "ON THE AIR"**

**1501 South Hill Street**

**Los Angeles 15, California**

Postmaster: Form 3547 Requested

BULK RATE  
U. S. POSTAGE  
**P.AID**  
Modesto, Calif.  
Permit No. 53

U.S.A.  
MODESTO, CALIFORNIA  
P. O. BOX 3150  
**CB HORIZONS**